THE GENESEE FARMER.

Agriculture is the most Healthy and Honorable, as it is the most Natural and Useful pursuit of Man.

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UNDER-DRAINAGE AND LIMEING.

"UNDER-DRAINAGE," says Mr. PUSEY, "has been used in England since the great rebellion, as Lord BRAYBROOKE has shown, and it received a new impetus from the late Mr. SMITH, who coupled it with subsoil plowing." By private enterprise, about 600,000 acres in the great Level of the Fens have been drained, although below high-water mark. The water is wholly pumped out by steam power and windmills. To avoid this expense and obtain a natural fall of 11 feet in 30 miles, the Fen men have just paid £150,000 ($750,000) and "have agreed to contribute £60,000 more towards new works in the Wash," merely for the benefit which will arise to their drainage.

Fortunately there is much less occasion to drain land in this country than in England, but even here, the necessity really exists in millions of acres. Tiles which formerly cost 90*s.* per 1000 feet, *i. e.* 60*s.* for tile and 30*s.* for soles, can now be wholly dispensed with, and pipe of 1¼ inch aperture substituted, which costs but *one-sixth* of the money, or 15*s.* per 1000 feet. A kiln for burning tile or pipe, on the cheapest plan, costs but £5, or $25. It has been tried by Mr. HODGES, the inventor, six years, and answers every purpose. In estimating the expense of draining, Mr. PARKES remarks: "The fact is that we have been too systematic in draining, especially when the work is begun upon a grand scale. The source of economy now must be in the maxim, that *one drain well laid to suit the circumstances, will often save a dozen by rule.*" There is great force in the above observation, for many fields require but one, two, or three well-laid drains in the proper places, instead of covering the whole area with one in 25 or 30 feet. Experience has taught this important lesson in England, that a soil may be *over-drained.* It is about equally injurious to crops to have too little or too much water in the earth where they grow. A good practical farmer is seldom at a loss to decide whether any part of arable meadow or pasture land is too wet for the production of wheat and clover. If the ground is too moist for these crops to do well, timothy and most other English grasses will not yield sweet and nutritious food.

Much has been written on the subject of the depth of drains; some contend that four feet is shallow enough under any circumstances, while others are content with drains only 30 or 36 inches below the surface. Few farmers have gone below three feet in making drains in the United States, and this depth seems to answer every useful purpose. Horse power is often applied to the excavation of ditches preparatory to putting down either tile or pipe. The latter is so much cheaper, and withal less liable to get stopped up, that pipes, and collars at the joints, are taking the preference and seem likely to drive horseshoe tile out of use. The collars are intended simply to protect the joints of the clay pipe, and are somewhat larger than the pipe which they surround, so that water can run in freely at each joint to fill the conduit. Before the earth is thrown in upon either pipe or tile, straw, or inverted turf, is spread over it to keep the soil from settling compactly around the apertures into the pipe or tile. Some use horseshoe tile without a sole or bed-piece, but the pressure of the earth from the superincumbent weight is apt to force up the clay into the concave tile, and completely stop the drain. The deeper the drain, the greater is the danger of this result.

JOHN DELAFIELD, Esq., the distinguished President of the N. Y. State Society, has the honor of being the first to import a Tile-Making Machine into this country, which, we are happy to say, has answered every expectation and served as a model for the manufacture of many others, with such improvements as American skill has been able to suggest.

In regard to the cost per rod of making a ditch, buying and putting down either tile or pipe, in the best manner, we are not sufficiently informed to express our opinion. Some gentleman in Seneca, Cayuga, or any other county, who has had experience in the operations named, will oblige us by communicating the results of the same for the Farmer.

LIMEING, as well as draining, has been more practiced in England and Scotland than in any other country. Without some lime in a soil, no crop can grow; and there are, comparatively speaking, but few districts in the United States where there is as much calcareous matter in the earth as is desirable. There is, however, an essential difference in the action of fine limestone naturally in the soil, and caustic, recently burnt lime applied by the hand of man. The latter acts powerfully on all organized substances and organic acids, and thereby sweetens sour soils. It also more readily decomposes salts of iron, alumina, and other minerals, and forms bone earth, or phosphate of lime, gypsum, or sulphate of lime, the chloride of lime, and other valuable fertilizers. We were on the beautiful farm of Mr. PATTERSON, near Baltimore, not long since, which has been dressed with lime at an expense of some $40,000. Mr. P. inform-

ed us that he applied quick lime at the rate of 200 bu per acre ; there are some 1400 acres in the farm. The lime was hauled several miles, and the experience of many years has proved the operation to be a profitable investment. The land was badly exhausted in tobacco culture, before the revolution. It now produces excellent clover and wheat. We have visited the plantation of Gov. HAMMOND, of South Carolina, on which have been spread over 300,000 bushels of unburnt marl, composed of marine shells, more or less finely comminuted. In this case, the result has been equally satisfactory. Gov. H. applies about 200 bu. per acre. More lime is used in New Jersey, Pennsylvania, Delaware, Maryland, and Virginia, than in any other part of the Union. Its high price, and the equal lack of other elements necessary to the growth of cultivated plants, diminish the consumption of calcareous manure. Where the cost of the article is a serious impediment, much less should be applied to an acre ; even five bushels will pay well in addition to other ingredients. The ten thousand miles of railway now completed, must obviate the difficulty of procuring lime in many States, and we hope that all farmers will give this mineral a fair trial. Land that abounds in organic matter or mould, requires more lime than a soil which possesses very little. Wet pieces of ground which have recently been drained, are peculiarly benefitted by a liberal dressing of caustic lime, which may either be harrowed or plowed in, as circumstances may seem to favor. Moderate doses, and often repeated, is a better practice than large ones at distant intervals.

Recent discoveries by Prof. WAY, and others in England, go to prove the necessity of lime in the soil not merely as an element of nutrition to be taken into the circulation of plants, but as an ingredient which is indispensable for the most favorable action of manure of every kind that yields ammonia. By decomposing salts of lime, such as the carbonate, sulphate and chloride, in the earth, ammonia is arrested and retained to feed and nourish vegetation. Stable manure operates much better on land that contains from one to three per cent of lime, than on that which contains only one-tenth of the proportions named. Every observing farmer knows that any given quantity of manure does produce equal results on all fields. Hence the question has been much discussed whether a man will make most money to apply his manure on his best or on his poorest land. As a general thing, the gain from the manure will be greater on good than on poor soils. Large experience, in countries where arable land is less abundant than in this, has shown the wisdom of limeing poor fields and thoroughly incorporating the alkaline mineral with the earth, before applying manure. If the dead clay contains any alum, lime will convert its sulphuric acid into gypsum ; if it contains copperas, gypsum will also be formed. If it possesses any phosphate of alumina, or iron, as poor soils often do, then lime forms bone-earth by combining with the phosphoric acid. Suppose the earth be nearly pure sand, alumina, (clay,) and iron—the commonest sort of poor land—and lacks vegetable matter, and all fertilizing acids and alkalies, even then it is advisable to apply lime, not in the expectation that it will alone suffice to renovate sterile earth, but to prepare it for the reception of organic manures. Lime is truly one of the staples of fertility, and those that can readily command it should see that all their pastures, meadows and tilled fields do not lack calcareous matter.

THE ECONOMICAL USES OF PEAT.

THE Journal of the Highland Agricultural Society for the last quarter, contains an exceedingly instructive paper from Dr. ANDERSON, Chemist to the Society, on the "Economical Uses of Peat." The researches of Dr. A. were directed to the object of determining, by careful experiments, the actual and relative powers of dried peat and peat charcoal to absorb and retain ammonia, and other gaseous bodies, which escape from nightsoil, stable manure, and other putrescent substances. His Report fills fifteen pages in the Journal named, and it ought to be reproduced in this country. We can find room only for the results obtained, with little of the details of the processes and experiments. We will state, however, that peat, for making coal, is cut into pieces equal to the half of a cubic foot and placed on trays or baskets of wicker-work, one above another, to dry. It is then carried to the building in which the burning takes place, where it is arranged over furnaces and still farther dried six or eight days. The furnaces in which it is carbonized may be described as a sort of pyramidal boxes of sheet iron of variable length, and about five feet wide at the bottom, gradually tapering to about a foot at the top where there is a sort of vent-hole. These pyramidal furnaces are open at the bottom and stand in trays also of sheet-iron. They are filled by tilting them on their sides, when the dry peat is carefully packed in, and retained in by bars which pass across the bottom ; and after being fired they are returned into an upright position. The combustion is allowed to go on until the flame ceases, which generally requires from five to six hours. Water is then let into the tray so as to exclude all air from the furnace, and thus extinguish the remaining charcoal. The reader will see that this is a very simple apparatus and must be effectual. The water in the tray does not rise high enough to reach the peat, or coal in the furnace. When it is cooled down sufficiently, the coal is removed and put through large sieves, the larger pieces being employed as fuel and the fine powder as a deodorizer. In Ireland, the cost of production appears to be as follows :

	£	s.	d.
Draining the bog and cutting the turf to produce a ton of dried peat,	0	1	6
Packing on the trays and wagons, and conveyance to the furnace-house,	0	2	0
Wear and tear, &c.,	0	0	6
	£0	4	0

It requires four tons of peat to make one ton of coal.

	£	s.	d.
Four tons of peat, at 4s.,	0	16	0
Labor, and expense of burning,	0	4	6
Grinding and sifting,	0	2	6
	£1	3	0

By the above figures it will be seen that a ton of peat coal costs nearly six times more than a ton of air dried peat.

We must now pass over much that is valuable to reach the comparative power of dry peat and peat coal to absorb ammonia.

"*Experiment* 1. A glass tube about half an inch in diameter, had a piece of cloth tied over its lower end, and was filled to the depth of about twelve inches with Irish peat charcoal and a solution of ammonia, containing 2.42 grains to the cubic inch, poured into it. The first drop of fluid that passed through it was

as distinctly alkaline as the original fluid, indicating that no rapid, or abundant absorption had taken place."

In the second experiment, putrid urine, which had a distinctly alkaline reaction, was used, and the first drop was distinctly alkaline. The liquid, however, lost both its smell and color in passing through the coal.

In the third experiment, a small quantity of ammonia, in solution, was poured over 1000 grains of charcoal and carefully stirred in. The smell of ammonia *did not disappear*, even after it had been covered up some time, and a test paper suspended in the upper part of the vessel was strongly affected. An additional quantity of ammonia was added, until, in all, 1.7 cubic inches had been used. This quantity of the solution contained 4.11 grains of ammonia, and it was consequently obvious that peat charcoal cannot absorb one-fourth of one per cent of ammonia—4 parts in 1000.

Without pursuing these experiments farther at this time, suffice it to say, that they contradict and seem to overthrow all previously conceived notions of the relations that subsist between ammonia and charcoal; but if these notions are really erroneous, the sooner they are overthrown the better. The truth is what is wanted—not error, however plausible.

1000 grains of surface peat—not charred, but dried at a temperature of 212°—took up 8.3 cubic inches of a solution of ammonia, equal to 20.08 grains of the alkali, or 2 per cent of the peat. 1000 grains of peat, dried to the same degree, taken 4½ feet below the surface, took up 21.78 grains of ammonia, or over 2 per cent. These experiments prove that thoroughly dried peat imbibes some eight times more ammonia than the too open peat charcoal. Hence, dried peat is one of the best substances known to mix with manure of all kinds, and for bedding for horses, cattle, sheep and hogs, to absorb their urine.

Dr. A. experimented to determine the relative power of "a good wheat soil" and dry peat to absorb and retain ammonia. The soil was found to contain 0.186 per cent of nitrogen, (the fertilizing base of ammonia) and only 0.203 per cent when fully saturated; indicating the absorption of only 0.017 per cent under the circumstances. As peat absorbs about 2 per cent, the difference is greatly in favor of the latter.

The readers of the Farmer in 1845 and 1846, will remember our urging the importance of digging and drying swamp muck for bedding for domestic animals and to absorb all liquid and semi-fluid manure. When applied *alone*, the experiments made by Mr. McVean, and others in Wheatland, did not indicate so high a value in muck or peat as Prof. Norton suggests in his excellent letter in our last.

PARING AND BURNING.

At a late meeting of the Staindrop Farmer's Club, Mr. Heavisde said that he would "break up all the old, tough, matted pasture land, and secure the improvement of its herbage, if subsequently it should be laid away [seeded again]; but he would *pare and burn, and not plow in the sod.* He had tried both plans, and if he might judge from the crops, he had 100 lbs., in one case, by adopting the plan of paring and burning instead of plowing in the turf.

This quite common practice in England, of paring off a part of the turf in old pastures and meadows, drying and burning it, is seldom, if ever, resorted to in this country. The advantages of the operation may be thus briefly stated:—The soil in such cases, contains an excess of vegetable matter, and, usually, an excess of acids which need to be neutralized. By paring or cutting off a part of the turf, and drying and burning it, a considerable quantity of ashes is produced, which, having an alkaline reaction, corrects any acidity that the organic matter below may exhibit when turned up by the plow, and decomposed preparatory to seed with wheat or other grain. Lands of this character are apt to be too wet for the production of the most nutritious grass and heavy crops of wheat. Draining, in such cases, should precede tillage. In England and Scotland, little beside burnt clay pipe or tile is used to remove any excess of water from the subsoil. Land treated in the way indicated, has, when re-seeded for pasture or meadow, produced three times more grass and hay than before.

Mr. Bell said, (at the meeting above referred to) "Farmers do not want an herbage which stock would eat rather than starve, that will not pay; they want an herbage which stock relish, and which fatten them and add to their weight." Grass that grows on wet ground, is always of an inferior quality.

Mr. B. said "there was another kind of land which he would plow out, land with a thin soil and a wet bottom. He would begin by draining such land thoroughly; plow it, it needs no paring; take a crop of oats, give it a covering of lime; fallow it again, sow in wheat, and afterwards lay it away in grass."

We regard the above as excellent advice. In this connection it is proper to inform the reader that Mr. Harrison said that "he had great experience in plowing out land, and he had always observed his crop weaker where he had pared and burnt than where he had plowed in the turf."

The condition of soils is so unlike, even where externally they resemble each other most perfectly, that one man's experience flatly contradicts the experience of another.

S. W.'S NOTES FOR THE MONTH.

Potato Rot.—Doct. Lee, in the last Farmer, says that to his mind, "There is no more mystery about the potato rot, than there is about an unripe frost-bitten pumpkin." It is humiliating to me to be obliged to dissent from the opinion of a man from whom I have already learned so much; and the simple fact that he is at issue on the subject of the potato disease, with most other practical and scientific men, would hardly suffice to shake my faith in his position, did not the sober lessons of both experiment and experience prove that he must be in error. If, as he asserts, the rot is owing to the constitutional strength of the plant being impaired by the exhaustion of the soil—bad treatment—why is it that the malady has been so universally prevalent, at the same time, in the old world and the new, on highly manured land and on poor land, in the new states, on new lands, and on the worn land? Because the potato seed taken from our diseased region to the alkaline, volcanic soil west of the Rocky mountains has there produced sound tubers, the Doctor infers that on any soil in like condition, sound potatoes may be grown. But facts show that salt, plaster, unleached ashes, and the most liberal application of well-rotted animal manures, with the best of tillage, have failed to arrest the disease. On Flickinger farm, in Fayette, potatoes were planted last year on a ridge of pebbly clay loam, which

had just been cleared of its heavy maple, bass, and whitewood trees, a heavy coat of virgin mould was plowed in, the potatoes planted had been grown on a sandy soil and were free from rot; still the vines died very early, and nearly the whole crop was lost. On the best clay loams in Fayette, on old sward with manure plowed in, every crop of potatoes has been almost an entire failure—no matter how rich the soil or how careful the cultivation. Strange as it may seem, the potato plants on the poor, sandy plains in Waterloo and Junius, have been very little affected by the rot, although the yield is small. Near this village, on six acres of light, sandy loam, never before planted with potatoes, potatoes were planted last year by Jos. WRIGHT. He manured with well rotted manure, ashes, plaster, salt, &c., and had a great yield of large potatoes, but one-third the crop rotted, leaving about 250 bu. of sound potatoes to the acre—a sufficient proof, and so far in favor of Doct. LEE's theory, that good manuring and culture will do much towards overcoming the disease, on a dry sandy soil.

OUR COUNTRY.—NAPOLEON once said that these United States exhibited the simple manners of early Rome, with the luxury of Rome in its decline. At no period of our history, has this remark applied with such truth as at present. If it is astounding to see the rapid strides that luxury has made in our great commercial metropolis, even within the last brief year; it is not less remarkable to note how very fast it is creeping into the interior. How often have I heard a farmer, in the midst of the annoying disturbances of his present social position, sigh for the primitive simplicity of his early log-house life. The day was when the household imported luxuries of the farm were purchased by the *gute vrow*, with the avails of her industry—the tow cloth, the home made flannel, woolen socks, dried fruit, (which included peaches, plums, and apples,) the *churnings* and the eggs. The prudent farmer who "*owed on his land*," had then a good excuse for appropriating all the avails of his corn and his cattle to the liquidation of the mortgage on his farm; and his wife, with praiseworthy self denial, sets herself to work to earn her own pin money. But, as the French say, all that is changed now. The spinning wheel and the loom, once the never-failing, and I may say precious, appendages of the farm house, the badges of its industry, its simplicity, and true economy, more common forty years ago than a carpet on the floor, are now consigned to the tomb of the Capulets! The farm is now paid for, and the lord of the soil can no longer plead exemption from domestic taxation. The wheat, the Indian corn, and the pork, are now fairly assessed by the wife, the sons, and the daughters, that they may adorn themselves and the house, to the delight of their own eyes and to the critical approval of the eyes of others. 'Tis true that with commendable industry the fruit is still cut up and dried, and the churnings are as large as ever; but in the round sum now required for family expenses, these things are like the drop in the bucket. But the salvo is that industry does not flag; the time that was spent at the wheel and the loom, is required in the now multipled duties of the *menage* and the increased claims incidental to fashionable civilization. Still no other class of our people are so little liable to exceed their income, as the farmers. Their self-denial, if not perfect, is always respectable. While our manufacturers besiege Congress yearly, clamoring for a bounty on their products, in the shape of a protective tariff, to enable them to flourish and live *comme il faut*, the farmer sees fine Mestizo wool imported into the country, under a nominal duty, without a murmur; the idea of living on any other industry than his own, perhaps never entered his head. His physical training, his industry, his economy and self-denial, overcomes all competition, and he is enabled to rejoice in a self-sustained manhood that is truly respectable.

NEWSPAPER INFLUENCE.—It is said that every man, woman and child, of a reflecting age and sound mind, is brought under the influence of journalism every twenty-four hours. To be convinced of the truth of this assertion, only so far as relates to agricultural papers, talk with a *soi distant* farmer who reads nothing, and he will speak of many improvements in manuring and tillage that he has orally learned from his reading neighbor; but only compliment him with being under the influence of *book farming*, and he will deny the charge as though it reflected on his manhood; he is like the infidel who denies christianity, while he is ashamed to be found acting out of the pale of the christian morality. Far more excusable is pedantry in the reading man, than the senseless pride of truth-hating, marvel-loving ignorance.

POTATOES AGAIN.—Since writing the foregoing, I have seen JOSEPH WRIGHT. He said that about one-third of his crop rotted; that the other two-thirds averaged considerably more than 250 bu. to the acre, large sound potatoes. Twenty-five two horse loads of soap boiler's ashes were applied to the acre, with as many more loads of well-rotted stable manure. He is decidedly of the opinion that the *ashes alone saved the crop*, as where the most ashes were found in the hill, the potatoes were the largest and best. He sold his *Mercers* for five shillings a bushel, and the balance of his crop to a shipper, this spring, at four and sixpence a bushel.

TILE MACHINE.—In this number of the Farmer will be found an advertisement from Waterloo, of the improved Tile Machine. Such is the demand for draining pipe and tile, this spring, at WHARTENBY's Pottery there, that his large stock of ready baked tile is already exhausted. The price averages about one shilling or thirteen cents the rod.

In the last Farmer a writer who sports the cognomen of "Anti Humbug," seems yet to lack that equanimity and comprehensiveness of mind, without which the critic himself is little better than a pragmatical "humbug." That article of JOSEPH HARRIS, which he so opprobriously assails, has been pronounced, by some of our best wheat growers, (and there are none better on this side of the Atlantic,) to be the best communication from a scientific practical farmer that has appeared in the Genesee Farmer for many a day. Mr. HARRIS does not condemn green crops as manure. He is undoubtedly an advocate for the system of manuring with green clover to a certain extent, urging only the necessity of keeping more stock, and making and applying some of the nitrogenous manure of the stable, as indispensable to the maximum yield of all cereal grains, after the soil has been so long worn without other manure than green clover.

S. W. has always, in his articles to the Genesee Farmer, held up the importance of the clover plant as a medium of manuring. Its long tap root acts as a subsoil plow to bring up the unexhausted pabulum from below; and then its ample leaves and lateral branches also collect and organize nutriment from the

atmosphere. But facts are stubborn things. I did say, and now repeat, on the authority of some of the best wheat-growing farmers of Seneca, that after a long course of manuring with clover alone, their crops of wheat have sensibly and gradually diminished, both in quantity and plumpness of berry; but that when only a little barnyard manure was superadded, the gain in yield and quality of wheat was very perceptible.

But JOSEPH HARRIS, who has served under Mr. LAWES, the greatest experimental farmer in England, will not probably be in the least jostled from his position by this discourteous charge of introducing "exploded transatlantic dogmas." I have no spleen to indulge against "Anti Humbug." He holds a well practiced pen and may yet arrive at an experience that will teach him to be less hypercritical. I hope he will continue a contributor to the Farmer and to give the results of all his experience in rural economy, in which his love of truth's triumphs may shine forth to the discomfiture of all ill-directed spleen and preconceived error. If, in *my sere and yellow leaf*, I felt an impulse to glory in my own knowledge of rural economy, it would be at once dissipated by the sad consciousness that our best practice in growing plants, at the present day, is still encumbered with doubt and uncertainty. Farming is still far behind many other arts, and the idea is humiliating that the present theory and practice of rural economy is to be referred to by the yet unborn, as belonging to a wasteful, improvident and barbarous age. S. W.—*Waterloo, N. Y., May*, 1851.

TOBACCO CULTURE.

(Continued from page 107.)

I have used guano with some success. In the spring of 1846 I applied 300 lbs. of African guano, (at a cost of $34.50 per ton) to the acre; it produced a fair crop of tobacco, as good as the average crop. I used plaster with it, a bushel to the acre. The guano was applied in misty weather, ploughed in, the land prepared, and planted. In the fall I sowed the land in wheat,—the crop was quite a satisfactory one. In the spring of '47 I seeded clover on the wheat,—it took remakably well, and in '48 I had a fine crop of clover on the land. In the spring of '49 it was prepared for corn, and the crop on it at this time shows the most decided effects of improvement. I am therefore of opinion, that guano may be used to advantage as an improver for the growth of tobacco, as well as wheat, and corn crops, &c.

The opinion is very prevalent that the effects of guano after the first crop is scarcely perceptible, and not at all to be relied upon. This arises from the fact that so small a quantity is applied, that the first crop appropriates so large a portion of its fertilizing qualities, that little is left for the succeeding crops. If small quantities of any other manures are applied, I am inclined to think that a similar result might be expected. I am sure the wisest economy in any and all manures is to lay it on plentifully, as it ensures good crops and permanent improvement, with judicious management in the rotation of crops. After tobacco should follow wheat, then clover.

It is important in the preparation of land for tobacco, that it should be well plowed, and that as early as the weather will permit. The first open weather in February should be availed of, to break up the tobacco land. The subsequent frosts will in a measure diminish the number of worms which cut off the young plants when first set out. I have heard of salt being used successfully, sown at the rate of 2 bushels to the acre—I have never tried it. The other method I have tried and found decided benefit from it.—The land being plowed in February should be rolled down so soon as the frost is out of the ground—it should be checked off with the plow that the manure may be equally distributed. The manure should not be permitted to remain on the surface, but should be turned under about the depth of three inches, and the land rolled down compact, and so remain until the leaves of the tobacco plants become as large as a dollar, or an inch and a half in length. It is then time to begin getting your land ready for planting, as with seasonable weather, the plants in a week or ten days will be fit to set out. The land should be thoroughly plowed, raked, and rolled, and reduced to a fine tilth, and then laid off, if for hills, 30 inches each way, to make fine tobacco, or 3 feet if it is desired to make large tobacco; if for drills, they should be about three feet apart, and the plants about 20 inches apart in the drill. So soon as the plants are large enough to set out, (which is when the leaves are from 4 to 6 inches long) the first rain they should be transplanted, the earlier the better. When the plants have taken good hold on the soil, they should be weeded, which is to scrape off the surrounding surface of the hill or drill so as to destroy the young weeds and grass that may be putting up. The land should be kept mellow by the plow or cultivator until the tobacco plants are nearly grown, that is, until the land is well shaded by the plants. The hoe should be used at any time grass or weeds are discovered near the plants, which the plow cannot remove, and also to put dirt to the roots of the plants, where they have been kept exposed, either by the plow or cultivator. The preference between the plow and cultivator must be determined according to the soil, season, and locality. I would prefer, (all things suiting,) the use of the cultivator, but in seeding the tobacco, and in wet seasons, the plow is necessary. The hoe at all seasons indispensable. When the tobacco begins to button, or put forth the seed-head, it should be topped;—the plant usually indicates the point of topping, having two leaves nearly the same length, at the place where the top should be taken off. The number of leaves that should be left on the plant, depends upon the time of topping, the growth of the plant, and the richness of the soil, from 16 to 22 leaves are the usual number; less would make the tobacco coarse, more might make the leaves short. I usually top and sucker with the hand—knives might be used if desired. The suckers soon make their appearance after topping, and when 3 or 4 inches long, should be taken off, as they draw from the stock juices that belong properly to the leaves. This operation of suckering has to be performed as often as necessary—twice is generally sufficient, though sometimes 3 or 4 suckerings are required, before the plant is ripe.

Many are the enemies of the Tobacco plant; the fly attacks it in the bed, and sometimes sucks out its juices after it is set out, and it perishes. The ground worm sometimes in armies attack the beds and blight the hope of the planter by a total destruction of his plants; and when set out, they are ready deposited in the soil, to commence their work of destruction. Freed from all the above enumerated pests, the novice would suppose his prospects bright for a crop;

his lands well manured and well set in plants, the promise of a luxuriant growth full before him, when the tobacco fly appears. He deposits his eggs upon the leaves, and multitudes of worms are hatched and enter life feeding upon the plant. The egg is about the size of a pin's head, deposited upon the under side of the leaf; at first, the worm is very small, but so rapid is their growth that in a few days they become three or four inches long, and most destructive. They are the greatest gormandizers in the known world, eating more than several times their own bulk of green tobacco daily, casting off their old skin as it becomes too small, assuming a new one, large enough to gratify their insatiable appetite. When these pests become abundant, the planter has his hands full; constant attention is requisite to stay their progress, and sometimes crops have to be cut before they are fully ripe, to save even a portion of what these *horn worms* have left. The best means of preventing their ravages, is to examine the tobacco and destroy the eggs. Every leaf should be carefully examined. Turkeys, and poultry generally, are great aids in keeping under the horn worm. Kept in the field a few days, and regularly fed before being set to work, (on corn or tail ends of wheat) they become fond of their employment, and seem to delight in the amusement which their daily wanderings over the tobacco field affords them.

The time for cutting tobacco must depend upon the time of planting, the soil, and season, and much upon the cultivation. If planted by the middle of May by the middle or last of August it should be ripe, and when ripe, cut. The appearance of the tobacco is the best guide by which to be governed in cutting. The color changes, and it becomes of a yellowish-green, and sometimes spots when very ripe. It is better to cut it when well ripened, as it cures better. I use a knife for cutting; the stalk of the tobacco is split, and then cut off near the ground—it is then hung on sticks about 4 feet 4 inches long, about 6 large plants on a stick, and the number increased if the tobacco is small. The knife used for cutting, has three sharp sides, and is fixed in the end of a staff, which is about 15 inches long, and has a handle at the opposite end.

It is held perpendicularly when spliting the stalk, and then the stalk is cut off by either of the sides that it may be most convenient to use. Some cut the tobacco without splitting the stalk, and use a spear in hanging, by which the stalk is pierced; the spear is placed on the stick by means of a socket, and the tobacco passes over the spear on to the stick. I have heard Gen. Wm. Matthews, of Charles Co., speak veay favorably of this method. I have never tried it. He is a gentleman well worthy of credit, and would be sufficient authority to justify planters in trying the spear, as used by him, in hanging.

When the tobacco is hung on the stick, it is either put on a scaffold, in the sun, or hung in the house, if it is desired to cure the tobacco red; the scaffold should be used if yellow tobacco is desired; it should be housed immediately it is taken from the field. If it should be put upon the scaffold, care should be taken that it should not be caught in the rain after it has begun to cure. If house room is plenty, I would prefer hanging in the house, as it saves one handling; if scarce, scaffolding is best, as the house will hold more when partially cured in the sun. The sooner tobacco is stripped after it is cured, the better; and when stripped, should be very carefully handled, so as not to break the leaves. The stripping is done by hand: it would be a matter of great saving of labor, if it could be done by some sort of machine, constructed for that purpose. I, however, doubt its practicability. When stripped, the tobacco should be carefully packed away, if in proper condition; if not, it should be again hung on sticks until such time as it will bear packing down. If put down too wet, it will mould; if too dry, it breaks and much disfigures it. The size of hogsheads, as fixed by the act of the Legislature of Maryland, in 1828, ch. 164, seems to me reasonable, to wit: 50 inches in the length of staves, and 76 inches in diameter at the cross and bilge. Oak is perhaps as good wood as any for materials for hogsheads; pine will answer very well, and gum or poplar, if sawed, would answer for staves; the hoops should be of red oak.—All should be perfectly dry before packing the tobacco in them.

As to the best mode of prizing, there is a great variety of opinion. If it is desired to use great expedition, the horizontal screw prize, perhaps, would be preferred; if it is desired to pack neatly and safely, and, at the same time, with ordinary speed, the beam and lever prize, with a swinging weight, that can be increased or diminished at pleasure, would be recommended. Mr. Rodolph M. Gibson, of St. Mary's county, has obtained a patent for prizing tobacco, which I have heard highly spoken of, and which from the high recommendation I have heard of it, I have no doubt is well worthy of public attention. I regret that I am not sufficiently acquainted with its construction to furnish a correct idea of it in detail. It is, however, very simple.

I have given a plain statement of the culture of tobacco. I have studied brevity, even, perhaps, at the expense of perspicuity, and yet this communication has far exceeded the limits of my original design. My object has been to impart to others the benefit of my own experience, to instruct, not to amuse them. Having given my own opinions and practice, I should be much gratified if others, of more experience and practice, would favor the public with communications of more practical utility. I desire no one to adopt any opinion or suggestion of mine, except so far as his individual benefit may be thereby promoted.

"Whether it would not, under the present circumstances of the tobacco trade, be to the interest of the planters to decrease the quantity grown, and introduce the culture of other agricultural products, and if so, of what kind?"

I propose a brief examination of the above question, and shall then close this communication. I have always thought that the planters would best consult their own interests by limiting the amount of tobacco grown, and improving the quality, thereby increasing the demand, and consequently the price. This view seems to be entertained by most intelligent planters whom I have seen, nearly all of whom have reduced the quantity grown, and many have abandoned its culture altogether. Those who have soils adapted to the growth of tobacco, may, I think, with great propriety, continue the culture with the very confident hope that good tobacco will (after the excess of over production of former years shall have been exhausted) pay a fair remuneration for its production. This must soon be the case, as the very reduced prices have so diminished production, that the demand must greatly exceed the supply, and pri-

ces must advance. One or two hogsheads, at the most, should be the limit to the hand, and that of a greatly improved quality. Those of our planters who have abandoned the culture of tobacco, have greatly improved their farms and added much to their corn and wheat crops.

The spirit of improvement seems to be abroad in our land, and I know of no more assignable reason for it than that many persons who had predjudices against book farming, have become daily readers of the 'American Farmer'—*the renovator of their minds, the fertilizer of their soils, and the great team-horse of their agricultural prosperity.*

I know of no other agricultural product than such as are raised by our farmers, that could be profitably introduced. A diminished crop of tobacco would enable the planters to raise more corn and wheat, and could any assurance be given of a remunerating price, I would recommend the experiment. The foreign demand can seldom, if ever, equal the supply of our breadstuffs, and except in cases of such unexampled famine as Europe has been visited with in the last few years, her consumption of our grain crop must be very limited. The chief reliance, then, of tha farmer, must be in the home market. That we know is not sufficient to consume a moiety of our surplus productions. What, then, is to be done? My opinion as a Marylander, as an American, as a philanthropist, is, that we must increase the number of consumers until they shall bear a fair proportion to the number of producers, and he who shall be mainly instrumental in producing this result, will entitle himself to the appellation of the benefactor of his country.

PRODUCE OF SEVENTEEN ACRES

Messrs. Editors.—I send a statement of the product of seventeen acres of land cultivated by Arthur Cullum, Esq., one of your subscribers here. I may add Mr. Cullum is not a professional farmer, but one who appropriates, with an amateur's devotion, his leisure hours from other business, to agricultural pursuits. The farm is a hill side, with a clay subsoil, and a southern exposure.

Product of 17 Acres cultivated by A. Cullum, Esq., Crawford Co., Pa., 1850.

25 Tons of Hay, at $5 per ton,			$125,00
55 Bushels of Wheat, (raised on sod turned over in in August—yield therefore less,)			55,00
76½ Bushels of	Barley,		53,00
75 "	Shelled Corn,		30,00
60 "	Potatoes, (the crop partly blighted,		15,00
40 "	Ruta bagas,		8,00
20 "	Oats,		5,00
Corn Fodder equal to two tons of Hay,			10.00
			$301,00

On another part of farm Mr. C. raised on six acres, 213 bushels of wheat, of a variety known as the *soft white*. A. Huidekoper.—*Meadville, Pa., Feb.,*

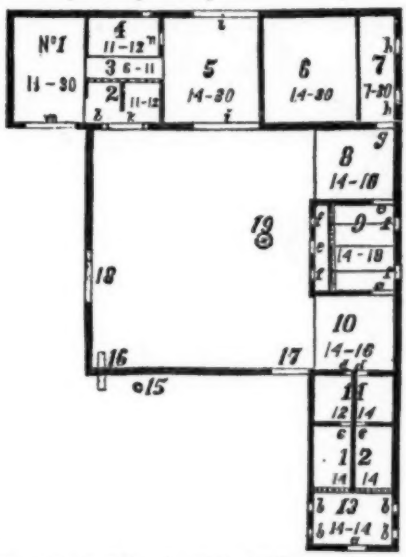
Remedy for Lice on Colts and Cattle.—Take white oak bark, boil in water, making a strong decoction, and wash the animals on the back and sides. In twenty-four hours the lice will be completely tanned. S. L.—*Piffard, N. Y.*, 1851.

To restore Pork.—In warm weather, the brine on pork frequently becomes sour and the pork tainted. Boil the brine, skim it well, and pour it back on the meat boiling hot. This will restore it even where it was much injured. S. L.—*Piffard, N. Y.*, 1851.

Country Residences, &c.

PLAN OF A BARN.

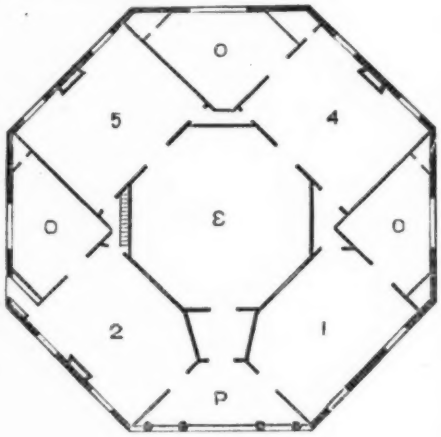
Messrs. Editors:—I herewith send you the ground plan of a Barn, which I think meets the wants of a very large class of your readers better than any I have noticed among the many excellent ones presented in your valuable paper, with the exception of the one presented in the February number. However all farmers cannot have side hills to build upon, of which the writer is one. Thinking my barn combines convenience with good taste, to some little extent, I place the within plan at your disposal.



The main building is 30 by 50 feet, with 14 feet posts. No. 1, wagon house. No. 2, horse stable for one team; the black dots are slats for the rack, which are put up perpendicular; a very wide board is fixed in the passage, No. 3, against the lower part of the rack, and the upper part of the board is two feet and a half from the rack and held there by two cords, one at each end. No. 4, grainery. No. 5, barn-floor. No. 6, bay for grain. Over the wagon house, stable and grainery, I have a tight floor, and there I keep my hay. No. 7, a place to keep sheep. No. 8, open shed. No. 9, four stalls to keep cows, or two cows and an extra team of horses, with rack, mangers, and a passage three feet wide to feed from Under this stable is a tank to receive the urine and wash from the barn-yard. No. 10, open shed; over this shed I keep hay for the cattle and sheep. Nos. 11, 12, and 13, hog pen; No. 11, sleeping apartment; No. 12, yards; No. 13, feed house; overhead a place to keep corn. The black dots are iron rods put on the front side of the trough. There is a partition through the center of the yard and sleeping apartment, so I can keep four or six porkers on one side, and a breeding sow on the other. Over No. 11, hen house. No. 15, pump. No. 16, water trough. Nos. 17 and 18, gates to barn yard. No. 19, a drain to the tanks. *a*, door; *b*, *b*, *b*, *b*, windows; *c*, *c*, swinging doors; *d*, *d*, doors; *e*, *e*, *e*, doors; *f*, *f*, *f*, *f*, windows; *g*, door; *h*, *h*, windows; *i*, *i*, doors: *k*, door; *l*, sliding door; *m*, door; *n*, door. Obscura.

AN OCTAGON HOUSE.

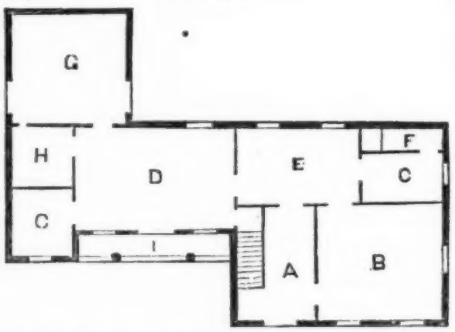
MESSRS. EDITORS :—I enclose the accompanying plan of an octagon house which I think very convenient for farmers' use, though somewhat unfashionable and uncommon in this part of the country, yet the form contains some advantages not perceptible at the first glance, one of which is that of enclosing more space, with less wall, than the square form; another, is the more solidity of such form, and less liability to be racked with high winds; and last, though not least, is its compactness, and short distance from room to room. The cost would be considerable less than for a right angled house of the same number of rooms of the same size.



PLAN OF GROUND FLOOR.

1, Parlor, 18 by 14. 2, Sitting room, 18 by 14. 3, Dining room, 20 by 20. 4, Square room or Library, 18 by 14. O, O, O, Rooms with closets attached. P, Triangular porch, passage, &c.

PLAN OF A CHEAP AND COMMODIOUS FARM HOUSE.



EDS. GEN. FARMER :—Noticing that you devote a portion of your valuable paper to this part of general improvement, in favoring the wants and lessening the expenses of farmers, especially in that branch of improvement which is so much engaging the minds of a great portion of the public at this time.—We are, at this age of improvement, generally selfish in regard to our pecuniary affairs. In erecting our farm buildings, it is a desire, and an interest, and at times necessary that we should use the utmost economy to curtail our expenses until we all get the upper hand of poverty.

Influenced by these just considerations, I propose to give to your numerous readers, the following handsome, convenient and cheap plan for a farm house.

By the preceding ground plan, you will see it presents the upright part 22 feet front, and 27 feet back,—the end to the front. To the left is a wing 21 feet front, 20 feet back, with wood-house 20 feet still back, which gives a front view of 43 feet by 40 feet back. The rooms above are to be one front room, with closets on each side, two bed rooms back, with closets, which at first glance will be found to be very handy and convenient. CHAS. H. HOBART. — *Yatesville, N. Y., May*, 1851.

SEED POTATOES.

MESSRS. EDITORS.—Having seen the subject of seed potatoes noticed in your valuable paper, the Farmer, I thought I would give my experience about them. My father taught me by practice that large ones were always to be prefered—a practice I followed till necessity induced me to try small ones; and I can now say with a good deal of confidence, that small potatoes are fully equal to large ones. My experience has been thus: I have planted one part of my patch with large ones whole, and part with large ones cut in pieces, and a part with small refuse ones, and I could discover no difference, except that those from the large whole ones were more nearly of *one size*, the yield being about equal, where the ground was equally good. So fully satisfied am I, that I usually eat or sell the large potatoes, and plant little ones. In fact the greatest yield I ever had was 65 bushels from a half bushel measure three times even full. But I took a different plan with these, which was to cut them about four weeks before planting, and spread them in a dry airy place and let them dry. This practice I think, will increase the yield, and pretty certainly shorten the time to maturity. However, each one can easily test the matter for himself. By the by, while I think of it, will you, or some one, through the Farmer tell me when is the best time to cut under-brush to prevent sprouting up from the root again. A SUBSCRIBER.—*Allen, Ind., March*, 1851.

SEED POTATOES.

MESSRS. EDITORS :—Your correspondent, "A Subscriber," in your April number, questions the correctness of my opinion and advice—that small potatoes answer well for seed. It does not accord with his experience. He does not state any experiment where the comparative results of small and large seed are ascertained. But I presume he has made such experiment. He states, however, an experiment made with large seed only, which I think interesting and worthy of further and full investigation. The eyes from the large end and from the middle, and from the small end of the same potatoes, were planted in separate rows, and the product of the seed taken from the large end exceeded that from the seed of the small ends, at the rate of one and a half tons (say 36 bushels) per acre. Now I confess that I am surprised, and wholly unable to account for this result. The fact I admit, because he states it; but I can see no reason why it should be so. And if this is to be

an uniform fact, it is important that it should be known, for it would be better to cut off the small ends and throw them away and plant only from the large ends. The difference in the product would repay, four-fold, the loss of the portion thrown away. I deem it, therefore, a matter of much interest to have the experiment repeated, in order to ascertain whether the results will be uniform, or whether in this case it may be considered fortuitous.

I consider your correspondent as suggesting, indirectly, a reason for this result in the opinion which he expresses, that the eye or seed at the large end is more mature and perfect than at the small end. I see not the truth of this position, nor the force of this reason. How is it ascertained that the eye at the large end is mature and perfect, while that at the small end is not equally so? And how does it appear that on a potato that is ripe, whether large or small, all the eyes are not equally matured? The fact that they are not, may be conjectured and assumed—but is it really so? And if it were so, provided they were all sufficiently ripe to germinate, why should there be a difference in their products? I make these remarks, not to controvert the suggestions of your correspondent, but to induce thorough investigation into this subject.

Now as to small seed. Influenced by early education, and the force of example, I should not risk them but for the results of actual experiment. Nor would I be induced to confide in them, after one experiment only. But having tried them two years, and on different soils, embracing different degrees of richness, and different characteristics, and finding, uniformly, the product of the small to be equal to the large, I have given the opinion that it would be safe to hazard them as a field crop. This opinion will govern my practice the present season. Should further experiments produce a different quotient, and prove that uniformity in the results is not to be depended upon, then there will be reason to discontinue the practice.

E.

THRESHING OATS.

Messrs. Editors :—As there has been two articles written on this subject, I suppose that I cannot say anything that will be instructive in relation to it; nor do I wish to; but I would like to give my opinion in regard to H. L. E.'s threshing 400 bush. of oats with his machine, with only four men and two horses. H. L. E. has one man to feed, one to untie the sheaves, one to take the straw, and one to take the grain, without chaffing, which would make about 800 bushels, chaff and all—a pretty good day's work for one man. But he might do it. One man might feed the machine; but he cannot untie and feed. Nor can one man throw the sheaves from the mow and untie. One man might get the straw from the machine, but he cannot stack it nor pitch it on the stack. H. L. E.'s horses might go without a driver, but all horses will not. Now if H. L. E. had said eight men instead of four, and an extra span of horses to change with, we might come to the conclusion that he had seen service; but as it is, we think that he is better at puffing than he is at threshing. Honest.—*Reading Center, N. Y.*, 1851.

We leave to others the question of economy, merely remarking that we have often seen these machines in operation, but never saw any necessity for a driver.

A FEW THOUGHTS FOR FARMERS.

Messrs. Editors :—I take considerable interest in agricultural science and would like to suggest a few thoughts, to which you may give such prominence as you think proper.

I have observed among farmers, an almost endless diversity of opinion as to agricultural practice.—Every other individual has a different method, and all have full confidence in the superiority of their own ways. For example, in endeavoring to avoid the destruction of potatoes by the rot, one believes in digging early, and another goes for leaving them in the ground as long as possible; one succeeded best by spreading them upon his barn floor, and another by putting them in the cellar and covering them with ashes. And so, in relation to almost every part of agricultural practice, farmers differ in some points, and often to the extent of direct opposition. The consequence is, that agricultural experience is an exceedingly unreliable guide, and the science itself is perplexed with confused, if not contradictory opinions.

The course of this diversity, it appears to me, is two-fold. With the great mass of farmers it is the product of limited information. They read but little, and of course base their conclusions upon their own narrow views and vague impressions, and as these differ in the case of different minds and circumstances, the conclusions themselves must be equally diverse. Among the better class of farmers, the diversity of opinion springs from imperfect observation. The farmer but partially notices the first facts of the case in hand, and trusts to his memory for the preservation of these, so that when he arrives at the final result, his conclusions are based upon partial data, and thus a wide margin is left for error, and consequently diversity of opinion. For example, the farmer may have carefully and correctly noted the character of the soil, the mode of preparation, the quantity of seed and the time of planting, and yet have neglected a dozen points that might very materially change the great result and thus give ground for a different conclusion.

Now, as to the means of removing this diversity of opinion, and settling the facts of agricultural practice upon a certain basis, so that the farmer's experience shall be a safe guide and a valid ground of belief, it will be seen at once that, in the first case, resort must be had to increased knowledge. When the farmer has, through the various channels of information which are open to him, thoroughly informed himself as to the present state of agricultural science, he will be less likely to be governed by crude impressions and limited views. In the second case, and this I regard as the most important to be noticed here, the evil must be removed by cultivating habits of thorough and systematic observation. The intelligent farmer might accomplish this by keeping *a farm-book of facts*, in which he should enter in regular order, every fact in his practice that could in any way afford data for sound conclusions. He might enter as follows, or in some tabular form, facts like the succeeding, in relation to a certain crop :

The Field.—1st, its exposure; 2d, character of the soil; 3d, its condition; 4th, manner of preparation.

The Seed.—1st, its character; 2d, the quality; 3d, the mode of preparation for planting.

The Planting.—1st, the precise time; 2d, the manner; 3d, its character as proven by time.

THE WEATHER. — 1st, the weather preceding; 2d, the weather immediately succeeding planting; 3d, its general character accurately observed during the growth of the crop.

THE GROWTH.— 1st, noticeable peculiarities; 2d, dates of different stages; 3d, the weather connected with such stages; 4th, general characteristics of growth.

THE HARVESTING.—1st, time; 2d, manner; 3d, condition of the crop; 4th, the weather; 5th, general treatment.

PRODUCE.—1st, quantity by actual estimates; 2d, quality; 3d, par value, &c.

In this way, substantial data for the comparison of modes, and the settling of principles, would be obtained, and the conclusions of the former be fixed upon the firm basis of accurate and reliable facts.

FREDERICK S. JEWELL.

POULTRY FACTS.

MESSRS. EDITORS :—In this age of big theories and big fowls, we need facts to guide us. Therefore, I herewith contibute my mite. In most of our statistics, *all* the facts are not given, so that we are not able to form a correct judgment. I will try and avoid this error.

My fowls are of the Poland variety, full-blooded, jet black, except the top-knot, and sometimes two partly white feathers in the tail of the cock. I obtained them, originally, from the Aviary in John st., New York. On the first day of March last, I had eight hens and one cock. One of the hens had the rheumatism in her neck. I cut her head off on the 23d May, and buried her near the foot of one of my grape vines. The others were healthy and laid between six and seven hundred eggs before September, and raised twenty-four chickens. Being engaged in building an addition to my house, my poultry record was lost for a time in August, so I cannot give the *exact* number of eggs. But it will be within the bounds of truth, to say that the seven hens laid six hundred eggs between March and September, and raised twenty-four chickens. The early chickens commenced laying in November, and have continued to lay until the present time, with the exception of about 5 weeks in the coldest weather. Early chickens at maturity make much larger fowls than late ones.

The cost of keeping my hens has been forty cents per year, each. Living in a village, I keep them housed until four o'clock in the afternoon, when they have the run of a yard, and are shut up at night. I usually feed screenings, at twenty-five cents per bushel, and corn at forty-five to fifty cents. My early spring chickens weigh from three to three and a half pounds in the fall, when dressed. I have now twenty-four hens, and expect to revel in *fat* eggs all the year. You are probably aware that there is as much difference between fat eggs and poor eggs, as there is between fat beef and poor beef. E. WARE SYLVESTER.—*Lyons, N. Y., Feb.*, 1851.

TO PREVENT THE BUG FROM DESTROYING VINES.—A small striped bug in the west, that destroys vines, is particularly troublesome in gardens, and but a few people in this country know a remedy; a small handfull of tansey pulled and placed around each vine, will drive the bugs away. A knowledge of this might save a great amount of care and vexation. — M. H. B.—*Spencer, Ind.*

VALUE OF SWAMP MUCK AS A MANURE.

MESSRS. EDITORS.—While reading J. P. NORTON'S remarks on the value of swamp muck in the May number of the Farmer, it brought to my mind a circumstance (which by the way, I have related to hundreds of owners of such swamps,) that took place on my father's farm in Manchester, Conn. My father had a sand hill on his homestead, that contained from two to three acres of *drifting sand*, entirely useless and good for nothing. He also had a muck swamp near by, and he concluded to try it on his sand hill. We hauled I should think, from 100 to 150 loads of the muck to the acre, and spread it on his sand hill. This was done in the fall, and the next spring we plowed and planted it to corn, we had about ten bushels to the acre, My father therefore said he had lost his labor. I wished the following year to have the same again planted to corn, to which he objected, saying he had had enough of muck manure. I however persuaded him to let me plow and plant it. It yielded twenty bushels of shelled corn to the acre. My father then sold the farm, and the same sand hill was plowed and planted for thirteen years in succession to corn, and at the end of which time the owner and myself while passing over the same ground, then planted to corn, we concluded that there could not be less than forty bushels of shelled corn to the acre, he at the same time assured me that he had never put a single load of manure on the lot with the exception of ashing and plastering his corn and said that the crop you now see is no better than for several years past There was also a fine young and thrifty apple orchard growing on the same land, beginning to bear. FREDERICK WOODBRIDGE.—*Franklin Mills, O.*

CLOVER MILL.

A CORRESPONDENT in our last number desired to be informed of the best clover mill in use — price, &c. We take the following from the Ohio Statesman, being notes made by the editor, at the Ohio State Fair. This machine received the first premium.

In the Agricultural Implement Department, a clover seed hulling and cleaning machine was exhibited by M. H. Mansfield, of Ashland, Ohio, which in many particulars is superior to any machine of the kind yet introduced in New York or the New England States. This machine will hull and clean ready for market, in a perfect manner, 5 bushels of clover seed per hour, with the power of three to four horses, which is at least 30 per cent. more than can be done by the latest improvements known in the east. In its principles it is entirely new, differing materially from any clover hulling machine, previously brought into use. The threshing or hulling part is simply a cylinder about 20 inches in length, suspended on a shaft with a 4 inch pulley to one end, to which is attached 30 spikes or rubbers in parallel rows similar to the drum of threshing machine. The concave has 128 of those spikes or rubbers, which are also set in parallel rows. The spikes are made of malleable iron, and are 2¼ inches long, and 1¼ inches wide. They are neatly fluted on each side, having ten of those flutes to a teeth, and being so arranged that the teeth of the cylinder nearly touch those in the concave. The process, it will be readily seen, is one, when the proper power for motion is applied, which will rub out the seed most perfectly, as fast as it can be fed into the machine. Those fluted teeth or rubbers each pass through a small hub in the inner part of the cylinder, and are so arranged that they are thrown back on the surface of the cylinder at the instant a stick, stone, or any other serious obstruction may accidentally get into the machine. The separator and fanning apparatus are got up on the most improved principles, and the whole machine is built with a view of combining durability with efficiency. The price of these machines at the place of manufactory is $95, being warranted to perform all that we have ventured to say in their favor.

OBSERVATIONS ON THE EFFECTS OF GYPSUM.

Eds. Gen. Farmer:—In looking over the Farmer for 1850, page 34, I found an article headed "Gypsum—its Elements and Value," in which the author has given answers to three inquiries, most of which accords with my opinion; but there is one fact I have observed that has escaped his notice, viz: that there is a certain principle in gypsum which has the power of retaining moisture of rain and dew. I have discovered that when walking through a field of clover where gypsum had been sown in the spring, when the clover is ancle high, the feet would be moistened with dew, when an adjoining field of clover, not plastered, was perfectly dry. This constrains me to differ in opinion from the learned author, where he says, "Gypsum does not, in the opinion of the writer, contribute to the growth of plants from the fertilizers which it draws directly from the air." In my opinion, this property of retaining moisture is the main cause of the astonishing effect gypsum has on plants. How it does this I will leave to science to determine. I have seen, on a dry, sunny day, when the dew on unplastered clover has been evaporated for hours, where gypsum has been sown the dew on the leaves collected in globular balls; and hence a thought struck me that gypsum was an agent in forming those balls of water, and in doing so it might have formed a thin transparent shell not perceptible to the naked eye, to preserve them from speedy evaporation by solar heat; for if one of these balls is pressed by the finger, it will appear to burst and the water to run out like the contents of an egg when the shell is broken, and sometimes it will collect again into several smaller ones. This I will also leave to science to investigate.

Another thing I have observed, which I think is in support of my position—that when I have sown gypsum in dry weather, and there has not been any rain for some time after, and consequently but little dew, I have never perceived any benefit from it: therefore I would recommend it to be sown early in the spring, as soon as vegetation begins to start, so that it may take the advantage of early rains. I have always found this way to succeed best. Green Farmer.

VIRGINIA LANDS.

Eds. Gen. Farmer:—I perceive an article in the Genesee Farmer in relation to Virginia lands. Being a resident there, and land holder, a few remarks in relation to the subject, might be acceptable. 1st, As to health, from the head of Tide-water to the Blue Ridge, no country can be more salubrious. The lands are moderately rolling. One-third may be natural forest oak timber, principally, one-third "old field pines," so called—that is lands that have been worked a few years and turned out; the balance in cultivation, the second growth, is invariably a luxuriant growth of pines. The manner of cultivation is, first, two crops of tobacco, then wheat and corn, alternately, for four or five years, then a crop or two of oats—then it is called "worn out." One horse, or mule, is the usual team for plowing. The soil is usually of a sandy nature for a few inches: subsoil, clay, sometimes quite to the surface. No lands are more easily improved, or retain manure longer, or with as good an effect. Clover grows luxuriantly, with a little help, and when once seeded, no after-culture will eradicate it. Wheat is generally sure, and the quality very superior, as is well known; the same of corn. For fruit of all kinds, grapes, peaches, apples, &c., particularly, it can't be beat. Never-failing springs, on most plantations, are plenty.

I am anxious for a company of northern farmers, say 100 to 150, to purchase a tract of land, of 20 to 40,000 acres, (some well improved and with excellent buildings,) within 20 to 30 miles of the principal cities and tide-water, on and adjacent to railroad and water navigation, 30 hours distance from New York by land, and 48 by water. The average price may be $4 per acre. For health, nearness to market, and genial climate, it certainly offers greater inducements, in my opinion, than any other portion of the United States.

The following may be about the prices of produce: Wheat, prime, $1.05 to $1.10; corn 70 to 75 cts.; rye, 65 to 70 cts.; buckwheat, $1.00 to $1.25; hay, $20 to $25; oats, 50 to 65 cts.; butter, 25 cts., always; cheese, none made; cotton, 12 cts., little raised, but might be; potatoes, $1.00; Irish and sweet potatoes, $1.00 to $1.50; beans, $1.30, &c., &c. It is generally supposed that it is disgraceful for a white man to labor; nothing is further from the truth. Any that wish to inquire more particularly, may write to me at Proctor's Creek, Chesterfield Co., Va.—post-paid. Samuel Clark, Jr.

FRENCH AND SPANISH MERINO SHEEP.

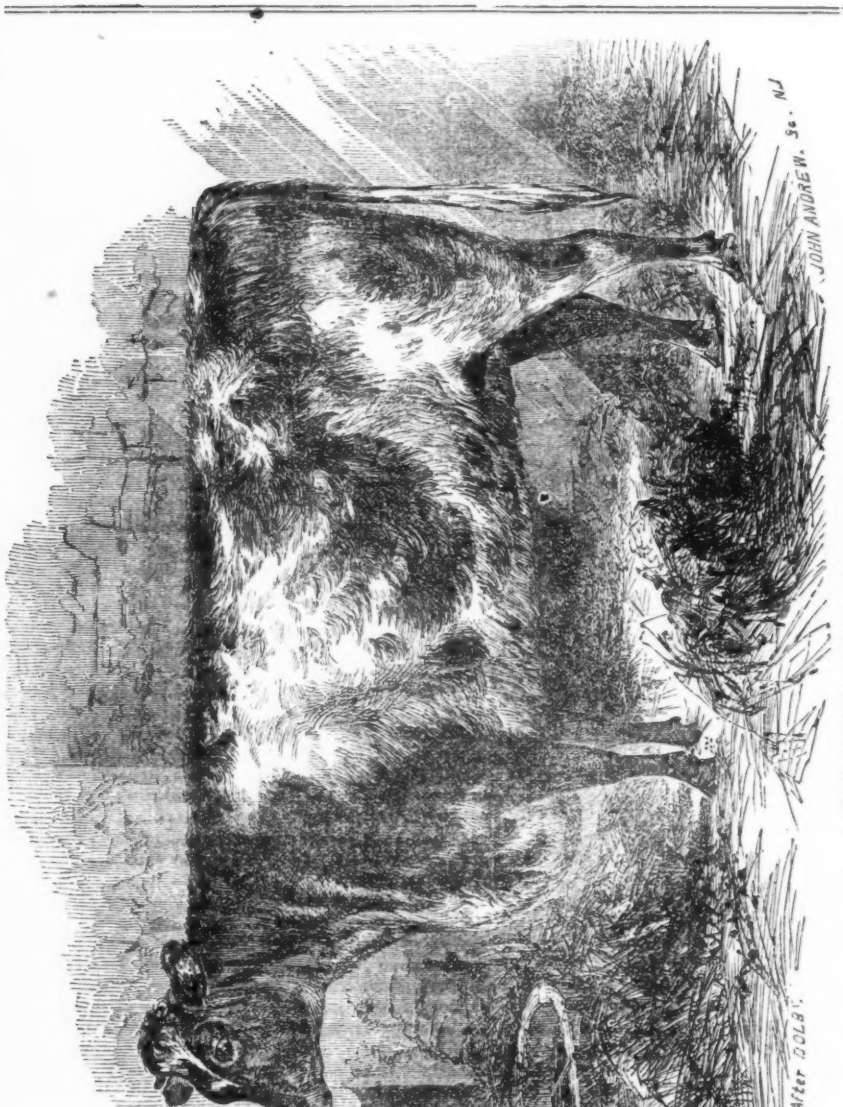
Messrs. Editors:—Having been somewhat extensively engaged for the last sixteen years in the growing of wool, and the rearing of fine sheep, I propose, very briefly, to offer to the public, through your highly esteemed journal, my views on the comparative merits between the French and Spanish Merino sheep.

When the French sheep were first imported, some four years since, I visited the flock, and re-visited it, and was in doubt whether they were an improvement or not. I hesitated about purchasing, but finally concluded to take a few and give them a trial. I was pleased with the result. I found that my Spanish sheep were improved, both in quality and quantity, by a cross from the French bucks. I now own a few of each importation made. I have recently purchased twenty-two ewes, being all but two in the hands of the importer. In addition to these, I have purchased thirteen bucks which were imported during the past winter, a part of which are for sale. The last ten ewes cost me $2250, or $225 each. For ease in taking on flesh, constitution of the animal, and weight of fleece, these sheep have no superiors, and I can cheerfully recommend them as the best among the races of fine wooled sheep. At least this is my opinion after a trial of three or four years. Merril Bingham.—*Cornwall, Vt., May*, 1851.

PLASTER.

Messrs. Editors:—Three years ago a piece of land (six acres) was planted with corn, the seed rolled in plaster (gypsum) and a little put on the hill, previous to hoeing, and without manure; the next spring it was plowed and seeded with clover. The next season, for several weeks previous to mowing, it could plainly be discerned, by the freshness and rankness of the clover, precisely the spot from whence came the hill of corn. In going through, we could plainly discover where a hill of corn was missing, in consequence of the absence of the plaster.

I wish to inquire whether the plaster acts on the depth of the soil, that the plowing of six inches in depth should not remove the hill, and what is the nutriment it extracts? The top soil is gravelly loam. I should like to hear from S. W., of Waterloo, or from some other correspondant. Frederick Williams.—*Dewittville, N. Y., April*, 1851.



SHORT-HORN HEIFER, PRINCESS II.

WINNER of the first prize for yearling Short-Horn heifers, at Syracuse, in 1849; and of the first prize for two year old Short-Horn heifers, at Albany, in 1850, at the New York State Agricultural Society's Shows in those years. She was bred by Mr. Stephenson, of the county of Durham, England, and was imported by, and is the property of Ambrose Stevens, of New York.

METHOD OF GROWING MELONS.

MESSRS EDITORS.—Select the poorest, and if possible a completely barren piece of ground; the reason for which will appear in the sequel. Lay off your ground into holes 2½ or 3 feet square, in rows 8 feet by 10. Late in the fall or during the winter, these holes must be filled with manure even with the surface, and then hilled up into hills with the soil or clay taken from them. Plant the seed from the 1st of April to first of June, according to your latitude, or your desire for early or late melons. From the 15th of April to the 1st of May is a good time in the latitude of Virginia and North Carolina. To avoid the ravages of the striped bug as well as in some measure obtain the advantage of a hot-bed, I intend hereafter to make small boxes, without bottoms, but covered on the top with millinet, which will, I think,

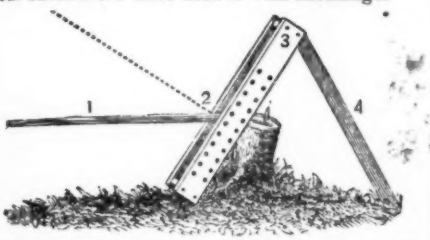
effectually answer the purpose intended, and save me much anxiety, as well as trouble in having to visit my tender vines twice a day to *bug*.

The best watermelon I have ever seen, is the Hanover, with white seed and red "*meat*." After the vines commence running, the boxes can be removed and packed away safely until another year. No work is required after the first, second, or third week, as it is disadvantageous to disturb the vines after they have commenced running pretty freely, being liable to be bruised or broken, and the ground around the hills being barren gives entire freedom to the vines to run, and the melons to ripen, without being shaded or injured by weeds or other growth. S. W.—*Virginia, April*, 1851.

A CHEAP STUMP MACHINE.

Messrs. Editors.—I wish to know from you, or some of your worthy correspondents, relative to a stump machine. I have sixty acres of what we Buckeyes call barrens, — the growth of the timber on it is from one foot down to a small twig. I wish to procure a machine that has sufficient power to pull small stumps in a green state. Let me know through your valuable paper the kind most suitable for small stumps, the cost of the machine, and where it can be obtained. J. S. Funk.—*West Liberty, Logan Co., Ohio.*

In the April number we gave a description of a stump machine. This however may be too costly and too difficult to obtain for general use. We now give a plan of another, and one that can be made by any farmer with the aid of a blacksmith. It was published in this journal some years since, and many of our subscribers have used it with advantage.



"There may be many of your readers living, like myself, on farms not very heavily timbered originally, and which have been cleared long enough for the roots of the stumps to become considerably decayed, to whom it would be some object to obtain a small, cheap and simple stump machine, which would answer their purpose as well as one more costly. In the sketch 1 is a round pole 10 inches long, 4 inches in diameter at the largest end, which is well banded. Into this is inserted a bar of iron 2 by 2½ inches, drawn to half that size at the end inserted into the pole, and 2 feet long. Near the end of this, two notches are cut, a little over 4½ inches apart. In the middle between these, a hole is punched and a link 6 inches long inserted, as seen in Fig. 2, which represents the bar, large hook to hitch under a root of the stump, a link inserted in each, and a connecting hook. The links are made of round ¾ inch Swede's iron, the connecting hook of 1⅛ do.; the large hook of a bar of old sable iron 18 inches long, bent round edgewise. 3 is a frame consisting of two oak planks 3 inches thick, 8 wide, and 7 feet long pinned together at the end through a piece of 4 inch scantling, between the planks. There are two rows, 4½ inches apart, of 1¼ inch holes through these planks; the holes being 3½ inches apart in the rows, from center to center. The holes in the right hand row are one inch lower than the opposite ones in the left. Through these holes two iron bolts, as large as the holes, are made to pass for the bar or lever to rest upon.

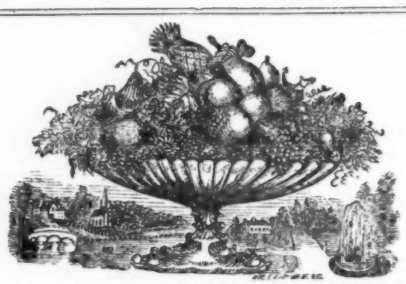
Fig. 2.

To use this machine, it is set up as seen in the figure; 4 being a board for a brace, the lever placed between the planks, the notches resting on the two bolts, and the hook hitched under a root. Now elevate the end of the lever, (which needs a short pole attached by a ring to the end of a long one,) withdraw the left hand bolt and raise it one hole higher; now depress the end of the lever and raise the right hand bolt; and so on as high as you wish. The cost of the machine was $7—iron $4, making $3. Any blacksmith and carpenter can construct one. With a team and sled and stone boat to draw the machine about, I have seen two hands, on a lot that had been cleared fourteen years, pull in a day from sixty to a hundred stumps, mostly from ten to eighteen inches in diameter. T. W.—*Ontario Co.*, 1849.

POTATOES.

Potato Rot.—Last spring I planted several varieties of potatoes, many of them mixed in the same row and in the same hill; soil rather moist, rich, loamy, some parts sandy, clayey, &c., and some with decaying vegetable matter, as chips, fragments of bark, grass, weeds, &c., intermixed. Among the varieties of potatoes were the Sardinias, or flesh colored, the White and the Purple Pinkeyes, Mercers, Large English Whites, and several others Of the Purple Pinkeyes there appear to be two varieties—the one resembling the Long White Pinkeyes, the others more coarse and irregular in their appearance. At the time of digging, several of these last were affected by the rot, (the dry rot chiefly,) and some few of the others, more especially of those that grew amidst the decaying vegetable matter. Most of the coarser variety of the Purple Pinkeyes, which at the time of digging were apparently sound, have since been destroyed by the same cause, the dry rot.

Seedlings.—A few years ago I sowed some potato seed, and the result not proving satisfactory, I repeated the experiment last spring. The season was cold and backward, and the plants did not come forward till late. I then transplanted about a dozen of them, which did very well, although they were late, and were overtaken by the frost while yet green and thrifty. I dug them, however, and found among them four or five distinct varieties, though only two or three appeared decidedly new. Some were long, white, smooth, with shallow eyes; others similar in size and shape, and of a beautiful, though not deep, red; the largest over three inches long and three in circumference; others similar in color, but differing in shape, the largest over three inches long and about five in circumference, smooth, flattened or compressed; others white, round, deep-eyed; and others very pale flesh-colored; &c. The greater part of them were small. I have kept them in an open box in a cool and tolerably dry cellar. On examining them January 10th, I found a large number of them affected with the dry rot. The kinds described above are least affected. It is my intention to repeat the experiment. H.—*Down East, March*, 1851.



Horticultural Department.

EDITED BY P. BARRY.

"I CAN appreciate the beauty of a fine field of wheat, corn, or clover, and I like to see fine horses and cattle, but as for your trees, and shrubs, and flowers, I know little and care less." This is a very common way for men to talk who have been born in the country, and whose whole lives have been spent there, surrounded by trees, shrubs, and plants, the most beautiful in the world. To such people, the country has really no beauties, save those that contribute to their riches or worldly prosperity. They seem to feel that it would be inconsistent for a good, thorough working farmer to give some attention to the spontaneous productions of his woods and meadows—to study, and become acquainted with the names, characters, and beauties of the trees, shrubs, and plants, that nature has planted and reared for him. Is it so? Is it necessary, in order to be a good farmer, to avoid all intercourse with nature, except in field crops? We know that is not so; for some of the best agriculturists we ever knew, practical, hard working men, too, were as keenly alive to the natural beauties of a landscape, and to the individual beauties of trees and plants, as though they had nothing else to do but cherish and cultivate that taste. They know the locality of every noble or remarkable specimen of forest trees in all the country about, and the favorite haunts of the most rare and beautiful wild flowers within many miles. They could tell in a moment how many species of oaks, elms, maples, &c., were indigenous to their forests, with as much accuracy as a good fruit grower could tell the varieties of fruit in his garden or orchard. To such people country life has a charm that sweetens and lightens the burden of labor, and they, and their family, are noted for their superior taste and intelligence. He only, who has a knowledge of trees and plants, and who has learnt to appreciate their beauties, can enjoy the pure pleasures of the country. In the spring of the year the budding and blossoming of the various species are noted from day to day with a lively interest, and not for their beauty alone, but as indicative of the earliness or lateness of the season. So are the periods of the maturity of their seeds, and the autumnal changing and falling of the foliage. These are the interesting and beautiful signs of the progress and change of season, that every man, and woman, too, living in the country, should, by no means, be insensible of.

We do not expect that anything we may say, now or hereafter, on this subject, will awaken those who have grown gray in their indifference to the productions of our woodlands, but we do hope to stir up the *young*, whose habits of thought and action are not yet formed, and who have not become wholly possessed of the one idea—that of money making—which blights and destroys all the finer and better feelings and tastes. They have more leisure than their fathers had, education is more general, science and taste are both uniting with labor in all parts of the world, so that working men will not be mere machines, performing their day's labor as an ox or a horse. "The cultivation of the soil" is no longer the farmer's motto, but the "cultivation of the soil and the mind,"—the *mind* above all.

But the native riches of our woods are not neglected by farmers or country people alone, they are neglected, unjustly, by all classes. There is a great taste throughout our country, and especially around our cities and villages, for planting shade and ornamental trees. Thousands and thousands of dollars are annually expended in ornamental planting, and whilst rare and costly exotics are gathered from all parts of the world, our own beautiful trees are neglected. The Tulip tree, or white wood, is one of the finest deciduous trees in the world, whether we consider its habit of growth, lofty and elegant, its foliage large, tropical-like, and glossy, or its flowers, as large and beautiful as the world-renowned tulip. People every day admire it, and enquire its name, when they see it growing luxuriantly in our grounds; but when when we tell them it is simply their native "white wood," they are surprized. Yet we can hardly persuade any one to plant it, just because it is a native of the woods.

What tree can be more beautiful than our chestnut, with its large, glossy foliage, and graceful cluster of flowers; or the elm, with its wide-spreading and gracefully-drooping branches; or the scarlet maple, with its bright and early blossoms, and silvery foliage; or the Amelanchier, (shad blow,) now lighting up the woods with its flowers of snowy whiteness; or the azaleas, (honeysuckle,) that will soon set the hills in a blaze of bloom. Then our noble oaks, hickory, walnuts, &c.,—why neglect such treasures, and seek for foreign species not half so grand or so beautiful? We would not discourage the introduction and planting of rare and fine exotics; they should be mixed with our native trees, to give the plantation an air of keeping and cultivation.

People who have not seen our native trees in open, airy situations, under good, careful culture, know nothing of their real beauties. An elm, or a tulip tree, crowded up in a thicket, with a tall, naked trunk, thirty or forty feet high, and a mere tuft of leaves on the summit, is a totally different object from the same tree standing on a lawn, with a finely developed form, and luxuriant foliage. Trees, like men, and more than men, show culture and care in their training. Now, we ask our young friends in the country, to take up this matter the present summer, and cultivate an acquaintance with the woodlands of their neighborhood. Some choice young specimens may be selected for removal, next autumn or spring, to the pleasure ground, or dooryard, or to the side of the highway, skirting the dwelling. Seeds may be collected as they ripen, and thus specimens may be reared that cannot be successfully transplanted from their native locale. Keep your eyes open as you pass around the fields and woods, as you would if you were "gunning," but with different feelings, and you will discover beauties that will surprise you and

make you exclaim, "How strange we did not see these things before." It would give us great pleasure to hear from our friends in the west respecting their native trees.

HARDY TREES.

It is interesting to note the hardiness of various trees or shrubs not yet well known in the country. Though the past winter has not been a cold one in the northern states, yet the alteration of heat and cold have been so frequent as to affect many half hardy plants quite as much as a much lower state of atmosphere usually does.

Cryptomeria japonica and *Taxodium sempervirens*, two new evergreens which were expected to prove decided acquisitions to our pleasure ground, do not, we are sorry to find, after two years trial, prove to be really hardy. The young shoots of the latter have either been quite killed by the frost—even when the plants have been covered; while the former, though not absolutely killed, becomes so browned and enfeebled that it can never be looked upon as a hardy tree north of Philadelphia. In the climate of Baltimore and southward, we have no doubt that both these trees will prove quite hardy.

Pinus excelsa, abies Smithiana, Picea cephalonica, Thuya filiformis, prove perfectly hardy in all exposures. The Deodar cedar, we are glad to mention, is quite hardy, and flourishes admirably in this climate, and will soon be extensively planted as one of the most beautiful of evergreens. We have still some doubts about the hardiness of the *Araucaria* or Chili pine. It certainly stands the winter—but still it seems enfeebled by it. The tree seems to demand a soil composed of three-fourths *sand* as a necessity. In rich, damp, loamy soils it neither grows nor bears the winters—even about Philadelphia—while in a somewhat shaded position and in a very sandy soil, it thrives as far north as the Hudson Highlands. Whether it will take to our climate as it does to that of England—where it is certainly the most striking of all evergreen trees—remains yet to be proved.

One of the handsomest of all the new evergreens, is the Yew-like tree from Florida—*Torreya taxifolia*. Its rich, dark green foliage, its extremely elegant habit and rapid growth, recommend it particularly to amateurs. It has borne the past three winters about New York and in this neighborhood quite without protection.

Rhododendron catawbiense and its many beautiful varieties, sent out here from English nurseries, prove much better adapted to hardy culture than even the *R. maximum* of our native woods. They should find a place in every good garden—and should be planted in a deep shapy border composed of sand and leaf mould.

Wiegela rosea, Spirea prunifolia pleno, Buddlea, Lindleana and *Forsythia viridissima*—three of the finest new deciduous shrubs lately introduced, prove perfectly hardy in all situations. The evergreen *Euonymus* and its two varieties with gold and silver striped foliage, are quite hardy about New York, and seem particularly well suited for town gardens, where verdure in shrubs during winter is desirable.—*Horticulturist.*

The *Taxodium*, we may add, does not prove hardy with us. A plant that stood the winters of 1849 and 1850, died last winter. The *Cryptomeria* is much hardier. We have had three plants out two winters, very slightly protected, and they now look well. Many of the first plants sent out were cuttings. When we get good, healthy, stout seedlings, they will, we firmly believe, be perfectly hardy here.—Ed.

The Fruit Crop.—We have never had a more abundant promise, in Western New York, than at this moment, May 13th. In many parts of Ohio, and elsewhere in the west, late spring frosts have cut off everything.

A friend writes us from Boston, that the crop promises fair, but not large. The season there has been cold and backward, but less so than last season.

In the peach regions, New Jersey and Delaware, the crop will be much smaller than last year, but the quality better.

REPORT OF THE POMOLOGICAL CONGRESS.

We learn from the "Western Horticultural Review," that the proceedings of the Congress has been published, embodied with the annual report of the State Board of Agriculture, and consequently out of the reach of the greater number of those who take an interest in the subject. This was a poorly managed affair, and we would be glad to know from our friend Lewis F. Allen, Esq., of Buffalo, who was *mainly* instrumental in connecting the pomological meeting with the "Board," what he thinks of it now. In the first place, the connection destroyed the value of the meeting at the time; and next, it withheld the proceedings from the public for six months, and then sent them out embodied with State documents! We think that there will not be much difference of opinion, hereafter, as to the impropriety of pinning the pomological meeting to the skirts of agricultural, or any other societies or institutes, except those strictly horticultural. The only consolation we have, in regard to the proceedings, is that, save a few items already published, they are of very little importance.

We have received the following note from our friend Col. Hodge, since we wrote the above:

Friend Barry.—In the May number of the Farmer you inform a Horticultural friend, that the published proceedings of the late Pomological Congress, can probably be procured of the undersigned. And from very numerous inquiries, I infer that not a few of the 40,000 subscribers to the Farmer, are desirous, to procure a copy of these proceedings. Now, it would give me great pleasure to forward to any of our Horticultural friends a copy of this work—but I am unable to do so for the following reasons; I have no copies to spare; I have not even one for myself: I have never had the pleasure of seeing one. And although I have the bump of hope pretty prominently developed, yet the prospect of obtaining a copy grows less every day. I do not know who the publishers are; but would say to them, wherever they may be, that by forwarding me by express forty or fifty copies, I will honor their draft for the amount of their bill.

Query.—Which is the better way, for the Pomological Congress to publish its own proceedings and pay for the same, or leave this matter to be attended to by others? B. Hodge.—*Buffalo, N. Y.*, 1851.

Mulching.—We must again remind those who planted trees last spring, of the importance of this operation. It is now so much spoken of as to be pretty well understood—a covering of the ground about the base of a tree, to the depth of three or four inches, with litter or half-decayed manure, extending around as far as the points of the roots. All newly planted trees, shrubs, and plants, should be thus treated. It keeps the ground from drying up about the roots, and prevents the growth of weeds. And not newly planted trees alone, should be mulched, but bearing dwarf garden trees, gooseberries, strawberries, and all other plants whose roots are near the surface. For mulching strawberries, some clean material should be used, such as saw-dust, chaff, short hay, or straw, or something of that sort.

The Fruit Garden.—Our treatise on Fruit Trees is now published and may be had, we presume, at all the principal bookstores in the country. In the first edition, which was issued hastily during the busy season, a few errors appear; for instance, in the introduction, Kenrick is printed "Renwick." On page 52, pipe tile is said to cost "a shilling," instead of *a cent*, per foot. Pear No. 28 was intended to succeed No. 37. There are some other, less important, errors, all of which have been corrected in the second edition, just issued.

THE SEASON.

THE *eighth day of May* was really the first day of a spring warmth. Through all the month of April it continued cold and dry. On the night of the 10th, we had a soaking rain that went fairly to the roots of trees; and the day following, and to day, (the 12th,) have been as warm as mid-summer—the thermometer as high as 90°. This has brought out the leaves and blossoms with magical rapidity. Three days ago, only a few of the earlier currants, gooseberries, almonds, cherries, and plums were in blossom; to-day the gardens and orchards are white—everything, but apples, in full bloom, and promising a most abundant crop. We have not, in ten years, had a fairer promise. Of ornamental trees and shrubs in bloom, the principal articles are,

The *Pyrus Japonica*, scarlet and blush.

The *Mahonias*, beautiful evergreen shrubs, low and spreading, with great clusters of bright yellow flowers.

The *Amelanchier vulgaris*, covered with snowy-white blossoms.

The Almonds, large and dwarf, double and single species and varieties, all very pretty.

Double flowering Peach, Cherry, and Sloe, and, in in a few days, we shall have the Thorns.

The flowering Currants are now in perfection. The *Gordoni*, crimson and yellow, and the new Double Crimson, (*Sarguinea flore pleon*,) are beautiful things—the latter, much finer than we anticipated. The clusters of flowers are three inches long, of a deep crimson, and each flower quite double.

LIGHT SELF-SUSTAINING FRUIT LADDERS.

For gardens where trees are low, and it is desirable to avoid bruising or breaking the branches, a "*self-sustaining*" ladder, of some sort, ought to be used. The annexed cut represents one which, if made of light material, can be conveniently carried in the hand. The steps should be wide enough to be stood upon. The single leg moves on a joint. A better way is to have *two* moveable legs, in order to give it increased strength and stability, and the weight is not greatly increased. Sometimes an upright piece is placed on the top to hold by, if necessary. Any ingenious person can make one of these, or something better, in an hour, and it will be found a great convenience; indeed it is indispensible where a few garden trees are to be managed, for the operations of pruning, fruit gathering, destruction of insects, &c., &c., require its frequent use.

JACQUES' NEW ENGLAND FRUIT TREES; A Practical Treatise on the Management of Fruit Trees. Adapted to New England. By GEORGE JACQUES, Worcester, Mass., 1849.

We are indebted to the author for a copy of this treatise, a neat, comprehensive, little volume in which we find the usual topics connected with fruit-tree culture, discussed in a manner that shows Mr. JACQUES to be a man of some experience. We have, for many years, heard his name connected with the nursery business, and the exhibition of fruits at the Worcester shows.

ANSWERS TO CORRESPONDENTS.

(Mrs. JAS. H. WILSON, Whitesboro.) The insects you speak of as infesting your roses now, are aphides, and are easily destroyed with tobacco smoke, or by syringing them freely with a solution of tobacco juice and soap suds, or rain water.

(J. W. GRAY, Balls Pond, Ct.) The Northern Spy apple, with us, is this moment, middle of May, as *fresh* as it was in January last—decidedly the *best* long keeper we have. The tree is a rapid grower and good bearer, and the fruit, in addition to its excellence, is large and beautiful. We cannot, however, advise you to plant it extensively, because it may not succeed so well in your locality as it does here.

(J. R. MOSER, Flint Rock, N. C.) Shorten, but do not entirely remove the shoots from the stems of your trees. Those cut back within a foot or so of the base, should have all the branches shortened but the leader, unless you intend to train them in the form of a pyramid, in which case you leave the lower branches entire for they must be the longest. You will find instructions in detail on these and similar points in the "Fruit Garden." Your other requests have all been complied with.

CELERY FOR WINTER USE.—(D. B. W., Horse Heads.) The seeds, with you, ought to have been sown in the latter end of April, in a warm border of rich, light soil, and then transplanted when three or four inches high to strengthen and fit them for final planting out in the trenches. The trenches should be a foot deep, with at least three inches of well-rotted manure worked into the soil in the bottom before setting the plants. Hoe frequently and water freely in very dry weather. As soon as the autumn weather becomes cool, the earth may be gradually drawn in around to *blanch* it. In dry ground it may be preserved well in the trenches, all winter, by covering with leaves, or some other material that will so far exclude frost as to admit of some being taken out when wanted. Enough to last a month may be taken out at once and kept in earth in a cool cellar. It can also be preserved in pyramidal heaps out of doors, like potatoes, with earth mixed with them, and a thick covering to exclude frost.

(J. EDWARDS, Little Genesee, N. Y.) We are not certain that it is possible to restore apple trees in the condition which you describe—the heart wood decaying. They probably stand on wet ground. We find that in soils containing but a very small amount of stagnant moisture, apple trees soon become mossy in the bark, and the heart wood unsound. It might be that a good scraping and washing of the bark, and a moderate shortening and thinning of the branches, in connection with good culture around the roots, would restore them.

CULTURE OF THE ISABELLA AND CATAWBA GRAPES.—(ANNE C. MCCULLOUGH, Mt. Morris.) Very simple. They are propagated by cuttings of twelve or eighteen inches in length—two or three joints taken off in the fall or winter, and planted in the spring in good, deep, dry ground. The cuttings planted so that but one eye remains out of ground. In one or two years they are fit to be transplanted to the place where they are to bear. Before planting, a good, rich, deep border should be made, and a trellis, or poles, provided for them to be trained to. They require an annual pruning, that is, shortening the shoots of the previous season's growth to three or four buds. See our last volume, pages 69 and 70.

(DANIEL BIGELOW, Lakeville, N. Y.) Your apple, "Sope•r," resembles the Rambo in size, form, color, &c., but is less juicy and more compact, and, we should think, would keep much longer. It is a *good* apple, but not so good as the Northern Spy, and some other late keepers. We are obliged for your kindness in sending the specimens.

FOREIGN NAMES OF FRUITS AND FLOWERS.—Notwithstanding the outcry against the *un*-English names of fruits and flowers, our floral friends at Cincinnati have just named a beautiful new seedling Azalea, *Boule de Neige*, being pure white and of compact habit. They are not among the "reformers," else they would have called it, in plain English, "*Snow Ball*."

Another, raised by S. S. JACKSON, Esq., is named *Warderia*, in compliment to Dr. WARDER, the editor of the "Review." This one is described as "white, with stripes and splashes of pale blush."

We see by the reports of the weekly exhibitions of the Cincinnati Horticultural Society, that their spring shows have been peculiarly rich.

Ladies' Department.

THE FLOWER GARDEN.

THROUGHOUT all the month of June, the decoration of beds and borders in the flower garden may be continued. We rarely plant our dahlias till the middle of the month. When planted earlier, they come into bloom in July, when the weather is so excessively warm and dry that they are scorched, the flowers do not open, and, on the whole, they do not give such satisfaction as when planted later, so as to come into bloom in the middle or latter part of August.

The Dahlia requires a good soil, moderately, but not too rich. When set in a bed of strong manure, the plants make a rank growth, but do not bloom so well, and the flowers are more apt to be coarse and ill-formed. A stake four or five feet in height should be set with each plant, to which it must be kept tied as it grows, being very easily broken by the wind. The Dahlia is really an autumn flower, and should not be expected to bloom, or forced into bloom, in midsummer.

For a few beds or masses on a lawn, or to fill up vacant borders, we would recommend,

1st, *A few Monthly Roses*, well selected as regards the color. They may be partly composed of Chinese, Bourbons, and Noisettes, as all these bloom incessantly, in a good rich soil. We may name, as first rate free growing, profuse blooming sorts,

BOURBONS—*Hermosa*, pale blush, very double and compact. *Souvenir de la Malmaison*, pale flesh color, very large and beautiful—indeed, one of the finest of ever-blooming roses, both in form, color, and luxuriance of growth and foliage. *Gloire des Rosamens*, a rapid, strong grower and fine bloomer, flowers not very double but large and of a most brilliant crimson. *Edward Defosse*, one of the finest new Bourbons, of a deep, rosy pink.

NOISETTES—*Ophire*, buff. *Chromatella*, or cloth of gold, deep yellow—very large and beautiful. *Fellenberg*, bright crimson. *Amie Vibert*, pure white.

BENGALS, or China Roses.—*Cels*, blush—a very free and fine bloomer. *Agrippina*, rich, velvety crimson. *Sanguinea*, blood red, with a stripe of white. *White Daily*, creamy white, and very sweet.

TEAS—*Lady Warrender*, pure white. *Luxembourg*, salmon buff. *Devoniensis*, straw color.

These are all good, and there are many others, perhaps, as good. A dozen plants, well assorted, will fill a good sized bed, and they will probably give more satisfaction than anything we could name.

Next to the roses, we would recommend a bed of Verbenas. No plant is better adapted to our dry, sunny climate, than this. A dozen plants, of as many different varieties, will make a beautiful display, from mid-summer until frost comes. The branches, as they grow, should be spread out and pegged down so as to cover the whole surface of the bed, making it a dense mass of flowers, relieved only by the mingling of the different colors. Then the

PETUNIAS.—These also are particularly well adapted to our climate, and cultivation has so improved their size, and varied their coloring, that they have become a most interesting class of plants. A single plant will cover, in a short time, three square feet of ground, and they bloom incessantly.

HELIOTROPES.—Too many of this cannot be planted, it is so sweet and so fine, either in masses, or mixed with other plants of more showy colors. The old sort is of a pale lilac, and the new one, *Voltarianum*, is a deep purple, rather bluish. These might be mixed, and some white flowering plant, such as *Double Feverfew*, set in the middle; or the deep blue *Plumbago larpentæ*, or the *Scarlet Salvia*, or even a fine *Fuchsia*, will make a good centre piece, both in growth and contrast of color. For single specimens on a lawn or border, the *Salvia Splendens Major* surpasses all other plants we know of. A small plant turned out in May or June, commences to bloom immediately, and it grows so rapidly, that, in the course of a month or six weeks, it will be three feet in height and as much in diameter, and will bear twenty or thirty long spikes of flowers of the most dazzling brilliancy. As we have said before, we know of no bedding plant, taken altogether, more desirable, and we recommend it among the smallest collections.

Cuphea platycentra, is another fine thing, either for planting singly or in masses, and it mingles well with Fuchsias, Heliotropes, &c. Its flowers are tube shaped, about an inch long, and the mouth is of an amaranth purple. Treated as a pot plant, in the house, this is an admirable thing. One of the best of recently introduced species in our green-houses now, small plants, are perfect masses of flowers. Its compactness of habit is a great recommendation.

CALIFORNIAN ZAUCHSNERIA.

The *Californian Zauchsneria* is one of Mr. HARTWEG'S discoveries in California, an excellent and popular bedding plant, every way as easily propagated and managed as a verbena. The plant grows compactly, about two feet high, and blooms in the greatest profusion, even when quite young. The flowers are of an orange scarlet, in shape not unlike the trumpet honeysuckle. We think it may be preserved over winter, in the open ground, by laying a piece of turf over it in the beginning of winter; but

it seeds well, and may thus be easily propagated like half-hardy annuals.

PHLOXES we have not mentioned, because they are now so generally cultivated as *hardy* border plants, that we do not deem it proper to class them with summer bedding plants. Still they are indispensable, and those who have not already supplied their gardens, may obtain plants in pots that will bloom the coming autumn.

SCARLET GERANIUMS.—We must not forget their large foliage and brilliant flowers, added to their free and constant blooming—qualities that make them desirable.

GARDEN IMPLEMENTS FOR LADIES.

PERHAPS we could not at a more appropriate season call attention to the nice collections of Garden Implements for Ladies, which are to be found at the Agricultural Implement Warehouses. Specimens shown us this spring, by J. RAPALJE & Co., of this city, are neater and better than any we have before seen.

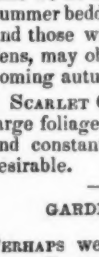


Fig. 1.

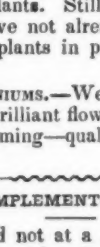


Fig. 2.

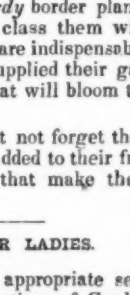


Fig. 3.

Fig. 4.

Fig. 5.

Fig. 6.

Fig. 1, is a small Spade, with a handle of the ordinary length, so that it can be used without stooping. Fig. 2, is a Garden Fork, for loosening the earth around flowers and plants. Fig. 3, Floral Rake. Fig. 4, Hoe. Fig. 5, Garden Fork, for loosening the earth around small plants and flowers. Fig. 6, Transplanting Trowell, invaluable for transplanting annuals from the seed bed to the place where they are intended to bloom, or for any other plant that it may be desirable to transplant

Editor's Table.

TO OUR READERS.—The present number completes the first half of the year. We have spared neither labor nor money to make the Genesee Farmer worthy of its extended circulation. We think we have the means of making our Journal still more interesting, during the remainder of the year, and we ask our readers, to make another effort to increase our circulation in their respective neighborhoods. We ask this particularly in places where few copies are now taken.—We can supply back numbers from January with *plate* of *Glass House*. With the July number we shall probably commence a series of letters from the World's Fair, illustrated with such engravings as may be necessary to a proper understanding of the subjects treated of. Before this number reaches most of our subscribers Mr. BARRY will have reached the shores of England, whither he has gone for the purpose of furnishing for our pages a full and correct account of what he may notice that will be interesting and profitable to the American Farmer. To those who read the Horticultural Department of this journal, we need not say that our report will be at least equal to any furnished for the American press. Mr. B.'s habit of close observation, practical common sense, and general information on all rural affairs, connected with excellent descriptive powers, warrant us in promising our friends a treat not to be excelled.

THE next STATE FAIR is to be held in this city, and being on the ground, we shall be enabled to add to the interest of our pages by a full report of what we may see and hear.

We have been often solicited to take subscriptions for a less term than a year, which for obvious reasons we have hitherto refused to do. At the request, however of many who for years have interested themselves in the success of the Genesee Farmer, and whose advice we always respect, we have determined to take subscribers commencing with the next number, which will be the first of the second half of the volume. The price will be one-half our usual charges for the volume, 25 cents for single subscribers, $1.00 for five, and $1.50 for eight copies. We are induced to make this offer, because our agents represent that many who have been deterred from subscribing on account of the high rates of postage, will gladly avail themselves of the reduction of postage by the new law, which takes effect on the 1st of July, to enroll themselves among our subscribers, and obtain a good agricultural paper at a price altogether trifling.

AGRICULTURAL IMPLEMENTS.—The improvement in agricultural implements certainly keeps pace with the improvement in agriculture. There never was before such a fine stock in Rochester, as at this time. We now have three well-filled establishments, Messrs. RAPALJE & Co., J. P. FOGG & BROTHER, and BRIGGS & BROTHER, and, from what we can learn, they are all doing a good business.

DAVID HALL, of Gaines, N. Y., passed through this city a few days since with a fine lot of French sheep, of the Taintor importation, purchased of MERRIL BINGHAM, of Vermont. Mr. H. wishes the farmers in his neighborhood to call at his farm and examine them.

RATES OF POSTAGE ON THE FARMER established by *the new law*, which takes effect on the 1st of July.

50 miles	5	cents a year.
300 "	10	" " "
1000 "	15	" " "
2000 "	20	" " "

The distance between 50 and 300 is reckoned as 300, and so between 300 and 1000, and the rest.

MR. BARRY'S "Fruit Garden" can be procured at our office, and as soon as the new Post Office law takes effect, we can send it by mail to any part of the country. Price $1.25.

PREMIUMS.—We have been a little delicate about sending bound Books by mail, on account of the high rates of postage, and from the fact, too, that it was forbidden by the old law. The paper bound books, which it is lawful to forward, coming under the head of pamphlets, are not durable, and in no way suited to a farmer's library. By the good sense of our rulers, this evil is to be remedied on the 1st of July. We never could see why the Post Office Department should refuse to carry bound books, if fairly paid for the work.

Below we give the award of Prizes for subscribers obtained for the Farmer up to the 16th of April. In addition to the names here given, a large number of persons have procured very handsome lists—to whom we are greatly indebted—and in most cases have forwarded the books which we offered every agent who procured sixteen, or more, subscribers. We feel a great pleasure in being thus able to scatter useful books on agriculture, over the land. We have already sent nearly two thousand books, and have some more yet to forward to agents to make good our promise of premiums.

1st, *Ontario County, N. Y., Fifty Dollars* in Agricultural Books, for the greatest number of copies of the Genesee Farmer taken in any county, being 765. This Library, according to the offer, is "to be kept as a County Agricultural Library, under the care of the Agricultural Society."

2d, *Calhoun County, Mich., Fifty Dollars*, as above, for the greatest number of copies taken in any county out of the State of New York, (448.)

3d. To the Town sending the greatest number of subscribers, we offered a Library worth *Thirty Dollars*, which, we think, is taken by the Town of Marshall, Mich., in which 246 copies are taken, but from the difficulty we have found in ascertaining the towns in which the different post offices are situated, we cannot announce this as certain. If more copies than this are taken in any town, we hope some of our friends will inform us of the fact at once.

1st, JACOB FRANTZ, Paradise, Pa., for the greatest number of subscribers sent by one individual, (414) *Twenty Dollars* in Agricultural Books.

2d, To CHARLES P. DIBBLE, Marshall, Mich., *Fifteen Dollars*, for the next greatest number, (323.)

3d, WM. B. STAFFORD, Waterville, Oneida Co., N. Y., *Ten Dollars*, for the third greatest number, (165.)

Selections of Books can be made by those entitled to them, or the choice left to us. Every agent can ascertain, by reference to the premium list in the January number, the amount to which he is entiled, and is requested to order, stating the mode of conveyance, &c.

SALES OF IMPROVED STOCK.—L. G. MORRIS' *Great sale of Improved Domestic Animals* takes place on the 24th inst. For further information see his advertisement in this paper. Catalogues can be obtained at this office, or from Mr. MORRIS; if required to be sent by mail, the postage will be pre-paid.

MR. GEORGE VAIL'S sale is on the 26th of June, at his farm, 2¼ miles from Troy.

ADVERTISEMENTS, to secure insertion in the Farmer, must be received as early as the 10th of the previous month, and be of such a character as to be of interest to the farmers. We publish no other. Terms—$2,00 for every hundred words, each insertion, *paid in advance.*

MESSRS. EDITORS:—Being a constant reader of the Genesee Farmer, and knowing that you take a great interest in promoting Agriculture in its various ways, and that you likewise have analyzed many soils and vegetables, I therefore take the liberty to ask you a question about the virtue of old Hops as a fertilizer of poor soils. There can any amount of two and three year old hops be bought at from one to two cents per pound. Would they, in your opinion, be worth that price for manure; and, if they would pay at that price, what would be the proper way to prepare them, and how should they be applied? My land is generally sandy, with a clay sub-soil. JACOB FRANTZ.—*Mount Hope, Pa., Oct., 1850.*

It will not pay to purchase hops at even "one cent a pound," for manure.

A New Work on Fruit.

CHARLES SCRIBNER (late Baker & Scribner) has just published

"THE FRUIT GARDEN,"

A Treatise intended to illustrate and explain the structure and character of the different parts of fruit trees—the theory and practice of the various operations connected with the propagation, transplanting, pruning and training of orchard and garden trees—the laying out and arrangment of various kinds of orchards and gardens, selection of varieties, treatment of diseases and insects, gathering and preserving fruits, &c., &c.—*illustrated with upwards of One Hundred and Fifty Figures.* By P. BARRY, of the Mount Hope Nurseries, Rochester, N. Y. 1 vol. 12 mo.

SUMMARY OF CONTENTS.

PART I. Describes the different parts of Fruit Trees—Roots, Stems, Branches, Leaves, Blossoms and Fruit; explains their different Characters, Functions, and Practical Classifications. It treats, also, of Soils and Manures, of the best Modes of Propagation, and the General Principles and Practice of Pruning.

PART II. Treats of the Propagation and Management of Trees in the Nursery in detail, both Standards and Dwarfs, beginning with the Stocks and ending with taking up the Trees.

PART III. Treats of the Laying Out and Arrangements of different kinds of Orchards and Fruit Gardens, the selection of Trees and of varieties, Planting, Pruning, and Training of Standards, Dwarf, Pyramids, &c., &c.

PART IV. Contains Abridged Descriptions of all the best Fruits of well-established merit, with selections for various purposes and localities, and lists of new and promising varieties; also, a Chapter on Diseases and Insects; another on Gathering and Preserving Fruits, and one on the more important Implements used in Fruit Culture.

CHARLES SCRIBNER,
No. 36 Park Row, and 145 Nassau St., New York.

NOTICES OF THE PRESS.

"This admirably arranged volume possesses an almost incredible amount of condensed information, given, too, in so earnest and easy a manner, that, despite of the really heavy freight the mind is taking in on its way, the reader is carried on from chapter to chapter, like a smoothly running car, and we suspect few could put it by unfinished without regret, or renew its perusal without a pleasurable certainty of entertainment or profit; and we would especially call attention to the first chapter, for, remembering our own ignorance, and the no less bungling efforts of our neighbors and friends, in any operation of tree surgery, we feel how thankful we should have been if we could have availed ourselves of Mr. BARRY'S kindly offered solution of the many mysteries that puzzled us then."—*Home Journal.*

"A valuable, because simple and practical, work upon fruits and fruit trees in America. The book is illustrated with drawings well calculated to assist the fruit grower, and it should be in the hands of all who have a patch of land, or who love good fruits.—*North American Miscellany.*"

"A mass of useful information is here collected, which will give the work a value even to those who possess the best works on the cultivation of fruit yet published."—*New York Evening Post.*

"This is, in brief, the title of a neat volume of about 400 pages, prepared with evident care and ability by P. BARRY, of the firm of Ellwanger & Barry, proprietors of the increasingly celebrated 'Mount Hope Nurseries.' The author is not only well read on the subject on which he treats, but in addition to his theoretical and scientific qualifications, he possesses a practical knowledge of the subject, in all its branches and bearings, that few writers have ever enjoyed.

'The work before us seems to be a thorough treatise upon the properties, modes of culture and most desirable qualities of fruits in general, with selections and descriptions of the most approved varieties for especial as well as general use. And the experience of the writer in the selection and rearing of the vast and superior varieties of fruit in Western New York—the great fruit garden of the country—as well as his familiarity with all the most approved varieties of eastern and foreign fruits, invest his book with a degree of authenticity and reliability well calculated to secure to it the utmost confidence.

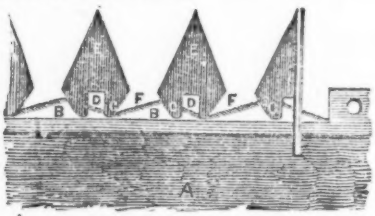
'Every fruit grower, whether large or small, should procure a copy of this excellent work."—*Rochester Daily Advertiser.*

"Our townsman, Mr. P. BARRY, has done great service to the cause of fruit culture and ornamenting of court yards, in this new treatise of his. The work, as the title page explains, is designed to illustrate the physiology of fruit trees, and the theory and practice of all operations connected with the propagation, transplanting, pruning and training of orchard and garden trees. It also gives many and valuable ideas upon the laying out and arranging of orchards and gardens, and, in short, is a very encyclopedia of all information pertaining to fruit and fruit culture. It is from the pen of one in the highest degree competent for the task he has undertaken, and is illustrated by many plates and figures. It is a book that should, as it will, command a ready sale wherever its author is known, and among all who desire a first rate treatise upon the subject, from a practical hand. Mr. BARRY wields his pen in a manner that does credit to him, and well illustrates the the possible union of cultivation of the soil and cultivation of the mind."—*Rochester Daily American.*

"It is, externally, a most pleasant appearing volume of nearly 400 pages, printed in elegant style. To all who take an amateur's delight in the cultivation of fruit trees and fruit bearing vines, the information embodied will be of great use."—*Rochester Daily Democrat.*

McCORMICK'S PATENT VIRGINIA REAPER.

THE undersigned, in again offering his Reaper to the farmers of N. York. for the ensuing harvest, deems it unnecessary to say much in the way of advertisement, having provided for bringing the subject directly to the attention of those interested, by means of travelling and local agents, who are provided with hand-bills for distribution in the different wheat growing sections of the State, which furnish fuller accounts of the Reaper with the recent improvements made on it, than could be generally given through the newspapers of the country. It is deemed sufficient to say here that the undersigned has made ample arrangements for the supply of whatever demand shall be found in the State of New York. for his Improved Reaper, (having improved it more or less every successive year since its first introduction,) provided that application for the same shall be made in due time, and that Hon Thomas J. Paterson, of this city, will still act as his principal traveling agent and will appoint local agents in all the unoccupied districts and from time to time supply local agents for counties or small districts with hand-bills and all needful information in relation to the Reapers, which will be kept on deposite at Buffalo and Rochester, and it is also intended to have one at Brockport, at some suitable place where persons desirous of purchasing will do well to call and examine them. They are referred for them to Holt, Palmer & Co., of Buffalo. T. J. Paterson, Joseph Hall, and David R. Barton, Esqs., of Rochester—Mr. Hall well known throughout this State for the last 10 or 15 years as the most extensive and successful manufacturer of Thrashing Machines in this state; and Mr Barton, equally well known as the most extensive "Tool manufacturer" in the State, have, as will be seen from their advertisements, taken agencies for the sale of of the Reaper, the former in the counties of Monroe, Ontario and Wayne; and the latter in those of Livingston, Genesee and Wyoming. Mr. Hall will be supplied with patterns, and can furnish any parts of the Reaper that may be wanted, to purchasers, and Mr. Barton will be supplied with sickles for new and old machines.



The improvement made on the Reaper since the last harvest, which is in the Cutting Apparatus, as shown in the Figure, consists of a combination of the Shoulder or back angle of the Finger (as patented and used in my Machine) with a slightly indented or zig-zag-edged Sickle, by which arrangement, as seen from the cut, the angle in the Sickle edge is made so obtuse, as together with the angle of the Finger for holding the grain to the Sickle, to effect the most perfect philosophical principle of cutting, by using just the right slope for cutting with the least resistance, and in the most perfect manner. The objections to the zig-zag edge, as used by Hussey and others, are in this entirely obviated, while all the benefits derived from the use of my Finger are still secured—Without the angle in the Finger for holding the grain to the sickle, it has been necessary to use so acute and abrupt an angle in the blade to effect the cutting, as to require a very high motion to the blade, and that, with so much friction and resistance as to make the Machine very liable to get out of order—the cutting being done more by means of the abrupt stroke against the grain than by the edge of the instrument. This is understood by every boy who knows how to draw a knife in cutting a stick, and needs only to be stated to be understood by all.

The price of the Reaper will be the same as heretofore, deliverable at Rochester or Buffalo, subject to storage—$30 payable on dolivery, and $80 on the first of December thereafter, with interest from the first of July, or $105 cash, and warranted to cut one and a half acres of wheat or other small grain per hour, and that the raking can be well done by a man riding upon it—that it is well made and durable with proper care. One of them cut at a late harvest 300 acres without a shilling's repair, or without changing or sharpening the sickle. Further comment is unnecessary—the undersigned being still determined (as heretofore) to introduce the Reaper upon its merits and to the satisfaction of the favoring community, who should look well to the form of the guarantee offered by others.

The undersigned will be excused for taking only a passing notice of two or three other Reapers he finds advertised in the papers before him. And first as to Seymour & Morgan's New York Reaper, it would seem almost like being cruel to say much now, after the tame and subdued account given by them in the April number of the "Genesee Farmer," compared with the insolent as well as false account published by them in the Democrat of December last, which was replied to by the undersigned shortly thereafter, (and which may be seen by reference to the Democrat or to any of the agents,) and to which they have not ventured an attempt at a reply. It may be remarked here, that the certificates they have published, are of the operations of the Reaper of last year, which they have been enjoined from building or selling; that those certificates are few and far between—there being but one from this State, and that a very weak affair; that all of the thousand and one reapers offered to the public, have been accompanied with a flourish of certificates quite equal, if not superior or recommend it to the public favor; provided, too, that they had to theirs—some such being in all such cases, attainable at a cheap rate, and that this new born experiment of theirs, to which they have felt themselves driven as a last resort, has nothing but their opinion, in their straightened situation, to support the right to make and sell it, which, also, remains to be tested—From trials made in the west of placing the raker on the "back side" of the platform, and which were well known to Seymour & Morgan before they, from their supposed necessity of the case, adopted it, the undersigned is sure it will result in a failure, and has been informed that they have provided what may be used as a seat at the side of the machine also, in direct and absolute defiance of the injunction, to be resorted to if the other should fail. The effect of the weight of the man on the left and back sides of the platform will be at once perceived by all who know any thing about the machines,—and which creates the indispensible necessity for the "large wheel" on that side, of which they speak, in addition to the fact that it is impossible for the man from behind to discharge the grain from the machine in good order for binding, which can only be done at all by a fork, at arm's length, instead of the grain being turned around neatly, as it can only be done by the natural sweep of the rake around the body of the man, (at the side,) as the centre of the circle described, and his weight balances so much on the other side of the machine, instead of adding to it. Under these circumstances, how far the public can again be induced to lean upon the broken reed of "Seymour & Morgan" remains to be seen. Their repeated cry of "wolf," in the former case, will at least not be likely to be headed in the latter. And the public are really too well advised of the fact that the Virginia Reaper has been "thoroughly tested" and they might have added, by thousands, to be influenced in the smallest degree by the ridiculous, as well as false statement of S. M., that a "large number of Virginia Reapers are now scattered throughout the country, condemned and unsold." This is another base and unmitigated falsehood of their own making, there being only thirteen of the (Chicago) Reapers sold in the State of New York, now unsettled for, most of which, if not all, it is believed will be, after a trial in the next harvest, and which was mainly owing to a want of due attention in putting them in operation properly, and believed to be a larger number than all other contested cases put together, of the 1400 Reapers sold at Chicago for the last harvest. These worthies well knew that, considering the amount of business done in the manufacture and sale of the Virginia Reapers, no parallel to its success can be furnished in this country in the manufacture of agricultural implements; and yet they would resort to such unmanly and contemptible means to undermine the character of a Reaper which they have been unable to overthrow by all these piratical efforts, which are likely soon to be punished as they justly deserve.

In relation to Hussey's machine, the undersigned will only reproduce the following notice of the inventor, in the last number of the Albany Cultivator, which repudiates his own machines as heretofore manufactured at Auburn for years by his brother, and which is the only one that has been offered to the farmers of New York, and refer to the communication of Joseph Hall, Esq., which follows it.

"Editor Cultivator—As the inventor of what is known as Hussey's Mowing and Reaping Machine, I am not willing to be held responsible for the operation of such machines as are not built by myself, at my manufactory in Baltimare; if those persons in other parts of the country, who are building by permission, and those who are infringing on my rights, do not keep up with my improvements, it is unjust that these machines should be allowed to give a character to my own. OBED HUSSEY."

C. H. McCormick, Esq:—I have been induced to take an agency for the sale of the Virginia Reaper, believing it to be *the best machine* for cutting wheat in use, and have determined to place one upon my own farm, after having purchased and used one of Hussey's Machines, and thrown it aside upon finding there was no economy in using it; it being necessary that the grain should be bound as fast as cut, requiring more help at one time than at others, to keep up with it, occasioning the stoppage of the machine at times, while at other times the men were not fully employed. Then again, the difficulty of cutting thin wheat, or cutting at all upon hill sides, the speed with which you have to drive, the power required to cut stout wheat, the wear upon horse flesh, and the impossibility of cutting at all (as it has no reel) when the wind is blowing with you, destroys, in my judgment, the utility of the machine. JOSEPH HALL.

Rochester, May 13, 1851.

Local Agents are requested to keep up a regular Correspondence with the undersigned, at Chicago, Ill., who will at all times be pleased to be enquired of through the mail, by any one, in relation to the Reaper, or so directly to receive orders for the same. Mr. Paterson may, and should also be written to, but he will necessarily be much from home, and all delay should be avoided that can be. C. H. McCORMICK.

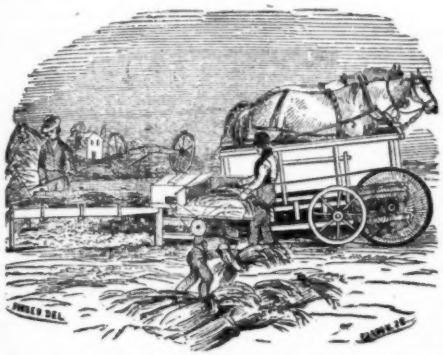
N. B.—Reapers will be forwarded to any part of this State, or to Canada; where there are no local agents to attend to the delivery and in starting them, without warantee, at five dollars deduction from the prices named, if ordered in season of THOMAS J. PATERSON, Rochester, N. Y., Office No. 6 Burn's Buildings, accompanied by a satisfactory reference.

Rochester, June, 1851.

New York State Agricultural Works.

AGRICULTURAL MACHINES AND IMPLEMENTS.

WHEELER, MELICK, & CO. continue their Manufactory at the corner of Liberty and Hamilton Sts., Albany, where they are prepared to fill all Orders with despatch.



Orders for WHEELER'S PATENT RAILWAY, CHAIN HORSE POWERS, and OVERSHOT THRESHERS & SEPARATORS, will receive their prompt attention. The large and increasing demand for these Machines, has induced the proprietors to erect a new and spacious Manufactory, and otherwise extend their means of promptly filling orders. Their Powers and Threshers have been sold in nearly every State in the Union, during the past year, and their superiority has been acknowledged by numerous testimonials, not only from Agricultural Societies but from persons who have used them. They have been awarded the first premiums at all the principal Fairs where they have been exhibited in operation, including the Pennsylvania State Fair, the Provincial Fair of Upper Canada, and the Michigan and Ohio State Fairs, together with numerous County Exhibitions in the different States.

The Two Horse Machine with from three to five hands, will thresh from 125 to 200 bushels of Wheat per day, or twice that quantity of Oats.

The One Horse Machine will thresh rather more than half that quantity.

PRICE AT ALBANY.

For Two Horse Machines,.....$145.00
For One Horse Machine,..... 120,00

Machines will be shipped to order to any part of the United States or the Canadas.

The subscribers are now shipping Powers and Threshers to their agents on the Mississippi and Ohio rivers, and in the interior of the States bordering on those rivers, and to all the principal ports on the Lakes, as well as to their numerous agents in the interior of the Lake States. They will be delivered at all our agencies with only the cost of transportation added to our home prices. Persons wanting to purchase, may, by writing to us, learn where they can obtain our machines most conveniently.

N. B.—Our Machines *are warranted*, as heretofore, *to work to the satisfaction of the purchaser*, or they may be returned within sixty days after they are received, and the purchase money, if paid, will be refunded.

We want a few more agents in most of the States. To competent men, who can give satisfactory references, liberal commission will be allowed. WHEELER, MELICK & CO.,
Corner of Hamilton and Liberty Sts., Albany, N. Y.
(Near the Steamboat Landing.)

For sale, at Albany prices, by RAPALJE & CO., General agents for Western New York, at the Genesee Seed Store and Agricultural Warehouse, 65 Buffalo St, Rochester, N. Y.

CAUTION.

The subscribers, Patentees of *Wheelers Patent Horse Powers*, having noticed that an Agricultural Firm is advertising that Wheeler's Patent Horse Powers and Overshot Threshers are manufactured and sold by them, when in fact they have not obtained from us any liberty to use our Patent, we hereby caution all persons that said firm has no right to use our Patent, or to manufacture or sell said Horse Powers, and that a sale by them will confer no right upon the Purchaser to use such Power.

Messrs. WHEELER, MELICK & CO., of Albany, and their Agents, are the only persons authorized to make or sell *Wheeler's Patent Horse Powers*; and every such Power made or sold by them, or by any person having a License to do so, has upon one of the Cast Iron Semi-Circles at each end of the Power, the words "WHEELER'S PATENT—WHEELER, MELICK & CO., MAKERS, ALBANY, N. Y."

A due attention to this fact will enable purchasers to avoid imposition and fraud.

No person or firm in Albany, except Wheeler, Melick & Co., is authorized to make or sell said Horse Powers.

Albany, April, 1851. A. & W. C. WHEELER, Patentees.

IMPORTANT TO MILLERS.

The American Miller and Mill-Wright's Assistant.

THIS is the most valuable book for practical Millers and Millwrights, extant. It is a new work recently published by Wm. C. Hughes, who is himself a practical Miller, and has spent the best portion of his life in the business of constructing, planning, and managing of Flouring Mills and the manufacture of flour. In preparing this work for the Milling public his object has been to establish a correct guide to the business, instead of speculative theories. Special regard has been paid to most of the essential improvements which have of late been introduced for the benefit of the Miller.

A few of the important subjects treated of and here given, taken from the contents of the work, are

Water power calculated for all heads; The size of the wheels for all heads, with the amount of water necessary to use on the same; The entire science of dressing the Mill Stone, with a practical treatise on Grinding; Remarks on the Culture of Grain; &c.; Table of Grain grown in the United States; Explanation of Technical terms used in Milling; The Quality of French Burr, as best adapted for grinding Wheat and Corn; The proper size of Mill Picks for dressing Stones; Composition for Tempering Cast-steel Mill Picks; The amount of Help necessary to be employed in a Mill of four run of Stones with their dutie respectively; Remarks on Packing Flour; Table for Packing Flour; &c., &c.

No Miller or Mill-wright should be without the Book, as the price is nothing in comparison to the value of the information it contains. The following Millers in Michigan, having examined the work fully approve of and recomend it to public notice;

Mathews & Beach, Pontiac;	D P Bonnell, Tecumseth Mills;
R W Lawson, Mt. Vernon Mills,	Charles W Chapel, Utica "
E R Brookfield, Volant "	E Brakham, Rochester City "
J W Fenner, Mt. Pleasant "	E Carpenter, Pontiac
W W Eddy, Sturger's Prairie "	J W Hughtlin, Charleston "
L Dow Crippen, Cold Water "	J Cupit, Stony Creek "

A long list of others might be given, but it is thought unnecessary.

Mr. Hughes has recently been appointed Flour Inspector at Buffalo, a very important post, showing the confidence the Millers and Shippers have of his ability.

The book is 12mo. size, and done up in good strong binding. Price, $1.50, at retail. ☞ Any person sending me *three dollars* by mail, and paying postage, shall have two copies sent him, done up in paper binding, (the only mailable way,) free of charge, or four copies for $5.

Books sold to pedlars and agents at reduced prices.

GEO. W. FISHER, Bookseller and Publisher,
Rochester, June, 1851. No. 6 Exchange st.

NEW YORK WIRE RAILING WORKS.

WIRE RAILING.

[SECURED BY LETTERS PATENT.]

ENCLOSURES FOR PUBLIC GROUNDS AND CEMETERIES; Fences for Cottages, Gardens, Farms, &c.

Window Guards and Gratings, for Stores, Dwellings, Lunatic Asylums, Prisons, &c.

Columns and Cornice Work for Cottages and Verandahs.

The above are made entirely of Wrought Iron and Wire, at one half the cost of Cast Iron, being extensively used in the city of New York, &c.—Superceding all other kinds of work for the same purpose.

RAILROAD AND FARM FENCE,

Made with Wrought Iron or Wooden Posts, being so constructed as to be used for moveable or permanent fence, at 80c. to $3 per rod.

Wire for Fences always on hand.

Portable Iron Bedsteads, Iron Statuary, Greyhounds, Dogs, Lions, &c.

Wrought and Cast Iron Railings made to order.

By addressing the Manufacturer and Proprietor, Circulars and drawings of the above will be forwarded.

JOHN B. WICKERSHAM.

Works, 59 and 61 Lewis Street. 240 Broadway.

AGENTS—C. B. Conant & Co., 215 Pearl street, New York.

New York, June, 1851.

Removal.

A. R. PRITCHARD'S Trunk Depot has been removed from 19 to 78 State street, recently occupied by Stoddard, Freeman, & Co., where can be found the largest assortment of *Trunks, Valises, Carpet Bags, &c.*, west of New York, and at the cheapest rates, wholesale and retail.

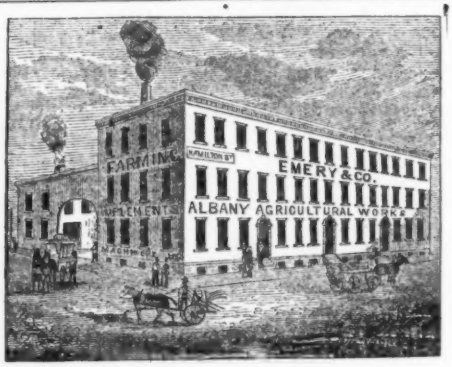
Rochester, June, 1851.

Improved English Seed Drill.

THIS is the best Drill out for sowing onions, carrots, beets, turnips, &c., &c., and should be in possession of every farmer and gardener. A full assortment constantly on hand and coming, and for sale at manufacturers prices, at the Agricultural Head Quarters, No. 65 Buffalo st., opposite the Eagle Hotel

June 1851. J. RAPALJE & CO.

SEED DRILLS.—Emery's Improved Seed Drills, the best in use, for sale by J. P. FOGG & BROTHER,



EMERY & CO.'S
NEW YORK STATE AGRICULTURAL SOCIETY'S
FIRST PREMIUM
RAILROAD HORSE POWER,
AND
OVERSHOT THRESHER AND SEPARATOR.

THE attention of the farming public is solicited to the newly improved Railroad Horse Power, as now made by the subscribers. Also to their Overshot Spike Cylinder Threshers, with Vibrating and Revolving Separators.

Having had much experience in the sale and manufacture of Horse Powers and other Agricultural Implements, and being acquainted very extensively with the wants of the farmers of this country, as well as the character of most of the implements and machines now in use, we think we hazard nothing in pronouncing our latest improved Horse Power far superior to any before made or sold by us, or with which we are acquainted

At the late Fair of the New York State Agricultural Society, held at Albany, their committee on Horse Powers unanimously awarded us the highest premium for the best Railroad Horse Power, among the large number of the most popular and approved kinds of the day, which were on exhibition and in competition,—it being considered the most efficient and durable on the ground.

As the principal mechanical parts of its construction differ so materially from those mostly sold by us, previously to the past season, as well as from all others now in use, we have thought it an object to the farmers, as well as for our own interest, to illustrate them by cuts and descriptions, as shown in the Farmer for March. The advantages of the recently adopted improvement are numerous and plainly seen, one of which is removing all the gearing and wearing parts to the outside of the Power, where it is free from dust and dirt, &c., and where it may be boxed up, requiring little time or oil to keep them in the best possible running order.

The liability of breakage and wear, and slipping of links and pinions, as in the rack and pinion powers, and most others, is wholly removed. In shipping them, the gears are taken off and packed in a box with other things.

Having sold a large number of the IMPROVED Machines the past harvest, all of which having given entire satisfaction, and when used side by side with the most approved of other kinds, having been preferred, we do not hesitate to recommend and warrant them equal, if not superior, to any before made or sold by us, or of which we have any knowledge.

Our Thresher consists of a small spiked cylinder, about fifteen inches in diameter, and twenty-six inches long, with a substantial spiked concave above this cylinder, which is adjustable to the work to the work to be done. The feeding table being level, allows the feeder to stand erect, and is little annoyed with dust and dirt —and no possibility of hard substances getting into the Thresher to its injury.

We attach a vibrating or revolving separator to them, which serves to separate all the grain from the straw, and leave it with the fine chaff for fanning mills, while the straw is carried off for stacking.

Having heretofore been obliged to have a large portion of some parts of our work done by contract, we have felt the inconvenience and want of dependendence to be placed upon the quality of materials and workmanship; we have now so extended our facilities as to enable us to make all parts of all our own machines, and can now assure the public that none but the best work and stock will be offered by us.

The Two Horse Power Thresher and Separator is capable, with three or four men, of threshing from 150 to 200 bushels of wheat or rye, and the single one from 60 to 100 bush., or double that quantity of oats per day.

The price for Emery & Co.'s one Horse Power,...		$85 00
do	do Thresher and Separator,.	35 00
do	Bands, wrench, oiler and extra pieces,.	5 00—$125 00
do	Two Horse Power,.....	110 00
do	do Thresher and Separator,.	35 00
do	Bands, oiler, wrench, &c.,.....	5 00—$150 00
Price of Emery's Thresher and Cleaner, with bands wrenches, &c.,.....		$75 00
do	Saw Mill, complete for use,.....	35 00
Price of Grant's Fan Mills, adapted for hand or power from.....		$22 00 to 28 00

Also Wheeler's Rack and Pinion Power, manufactured by ourselves, and warranted equal to any of the kind in use, [or made and sold by any other manufacturer,] which we sell with a full guarantee of the right of using the same in any territory of the United States, for the following prices:

One Horse Power,.....	$75 00
Two Horse Power,.....	100 00

The Threshers not being patented are the same as above quoted.

All the above are subject to the warranty of three months use and trial, and if not satisfactory may be returned and full purchase money refunded.

For further particulars see Illustrated Catalogue, furnished gratis on application to EMERY & CO.

Original and sole Proprietors of the Albany Agricultural Works, Warehouse and Seed Store, Nos. 369 and 371, Broadway, Albany, N. Y.

June 1851.

DOMESTIC ANIMALS AT AUCTION.

THE postponed yearly sale of Full Bred Short Horns and Improved Dairy Stock, consisting of about fifty head, will come off at my farm on Tuesday, June 24th, 1851, at 12 o'clock, M. I shall dispose of all the improved Dairy Stock, which is composed of the finest Short Horn, with a slight cross of Amsterdam Dutch, which some writers say was part of the original ingredient which composed the improved Short Horns.

I am now breeding Short Horns, Devons and Ayrshires, each separately and pure, which, owing to the limits of my farm, make it necessary to confine myself to those three breeds. By the awards of the State Agricultural Society, the American Institute, and my own County Society, (with the exception of last year, when I was not a competitor at either,) it will fully appear that I have been a very successful exhibitor. The Cow which won the First Prize as a milker, at the American Institute last year, was bred by me, and composed of the above alluded to Dairy Stock Several of the Bulls got by Lamartine will be of the most appropriate age for efficient service the coming season. All Cows and Heifers old enough, will be warranted in calf at the day of sale, by my imported Bull, Lord Eryholme, or my celebrated Bull, Lamartine.

I own two thorough bred Devon Bulls; one the celebrated old Major, the other, one and a half years old, imported by me from Devonshire. One of the above animals will be sold—which, I have not yet determined.

A full Catalogue, with the pedigree of each animal, will be published in due time, with minute description of sale, &c.

I also have a number of Suffolk Sows, in pig to my imported Boar, most of the progeny of which will be old enough to dispose of on that day.

I also have about 20 South Down Ewes, most of which I imported from the flock of Jonas Webb, and now in lamb to my imported Buck, Babraham. Some of the Buck Lambs will be offered at auction on that day.

This sale will not only offer an opportunity to obtain Stock from my previous herd, but will also enable persons to procure calves from my imported Bull, lambs from my imported Ram, and pigs from my imported Boar—all of which animals were recently selected by me in person, when in England.

The mode of warranting the Cows and Heifers in calf, is this: in case they prove not to be so, it shall be optional with the purchaser, on his *certificate of that fact*, either to receive from me $25 (say twenty-five dollars) or to send the cow to my farm, and I will keep her the proper time (free of expense) to have her got in calf to either one of my Bulls, which he shall choose. I will give $25 for any Heifer calf from either of the Cows or Heifers sold at the sale, delivered on my farm, at two weeks old.

Stock purchased to be sent at a distance, will be delivered on ship-board or railroad in the city of New York, free of risk or expense to the purchaser.

Persons living at the South, in a climate to which it would not be well that stock should be transported at that hot season of the year, may let such animals as they may purchase, remain with me until the proper season, and I will have them well taken care of, and charge only a reasonable price for their keep. One of my objects in breeding improved domestic animals, is to assist in distributing them throughout the Union, deeming it one, if not the most important feature to promote profit to the cultivator of the soil, and to benefit the consuming country at large.

All communications through the Post please pre-pay, and I will pre-pay their answers, and also a Catalogue if required. Catalogues will be to be had at all the principal Agricultural Warehouses and offices of the principal Agricultural Journals, on and after the 1st day of June next. Persons wishing to view the stock at any time, will find my superintendent, Mr. Wilkinson, to give them the desired information when I am at not at home.

Dated, this 4th day of March, 1851, at Mount Fordham, Westchester County, eight miles from the City of New York, by the Harlem Railroad. [4-3t] L. G. MORRIS.

Emery & Co.'s Horse Powers and Threshers.

EMERY & CO.'S Premium Railway Horse Powers and Threshers, which were awarded the first premium at the last State Fair, in competition with many others, for sale at the State Agricultural Warehouse No. 25 Cliff street, New York.

[6-4t] G. H BARR.